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MICHIGAN/MEDICINE

OFFICIAL JOURNAL OF THE MICHIGAN
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VOLUME 74, NUMBER 2　JANUARY, 1975

A substantial and growing minority of Michigan's physicians (10%) are women. They and their male colleagues share problems of practice management, human relations, continuing education and medical expertise. In addition, many are wives and mothers. All buck a long-time male dominance of their field. Four articles in this issue explore the statistics and the issues and introduce you to some of Michigan's women physicians.

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Both often

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Associated depressive symptoms

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Michigan Medicine Volume 74, Number 2 Jan. 1975

Editorializing...

For all the years of United States history, and until now, the woman physician has been a real rarity. Elizabeth Blackwell, MD, this country's and perhaps the world's first female MD, was licensed in 1849. But in recent years, and particularly following passage of equal rights legislation, the situation is being turned around. The number of women medical students and practicing physicians is growing by large amounts.

This will mean changes in attitudes, working relationships, and, even, sometimes, building facilities. The greatest changes are yet to come in academic medicine, where there are no female deans of medical schools and the situation is still predominantly male-oriented.

But perhaps the changes won't be so great as sometimes feared. Most women physicians want only to be granted the same opportunities and respect given their male counterparts.

It's an opportunity for cooperation, enrichment of the medical profession and greater humanity. We hope that the articles in this issue promote further understanding and harmony.

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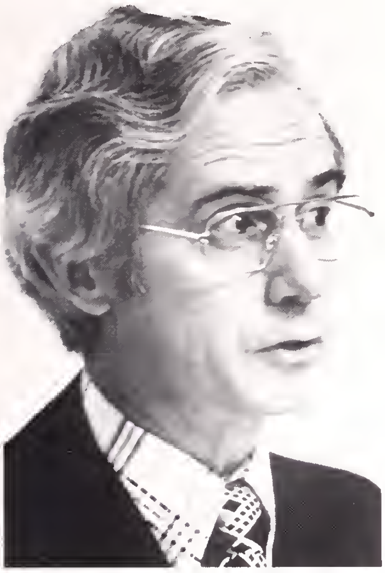
President's Page



Doctor Masters

New Year's Eve Magic

At the coming of the New Year it is customary to review our activities of the year past and to send Holiday greetings to our associates. This I want to do, in good traditional form, but there is so much more in my heart and mind as 1975 is born.

Serving as your President is a demanding but rewarding honor. I feel that our work together has given me an insight into the complexities of medical practice which I want to share with you. If our hopes for the future could be wrapped into one New Year's wish, these are some of the thoughts I would include:

1. I would wish all doctors of medicine to join you as active and vigorous members of their county and state societies.
2. I would wish for each doctor of MSMS enhancement of that all-important rapport with his patients.
3. I would wish a united profession in every sense of the word as we face the challenges of the future.
4. I would wish a solution to the apparent mal-distribution of doctors so that all patients could find a doctor when they need one.
5. I would wish for all of us a dramatic increase in number of family physicians.
6. I would wish an intensive public education effort, especially in the areas of what good health really is, and what part medical care can play to achieve it.
7. I would wish for more doctors to be politically active.
8. I would wish that all doctors once again assume the mantle of Healer as their No. 1 goal.
9. I would wish our researchers God-speed in their efforts to solve the dilemmas of cancer, arteriosclerosis and other degenerative diseases.
10. I would wish for a vision for our profession that it might preserve the practice of medicine free of bureaucratic red tape and inefficiency.
11. I would wish for a solution to professional liability, knowing full well it will take the concentrated efforts of all of us to solve this problem.
12. I would wish peer review to be improved at all levels that we might show the public the true nature of our profession.
13. I would wish the practicing community and the education system much more dialogue so that our doctors in the future will have the needs of their patients ever before them.

These are idealistic and wistful dreams, I realize — the true stuff of New Year's Eve magic. Strangely, enough, as I read them over, I am struck by the possibility that all could be realized in our lifetime, if all men and women of medicine would only address their skills to these goals.

Brooker L. Masters, MD

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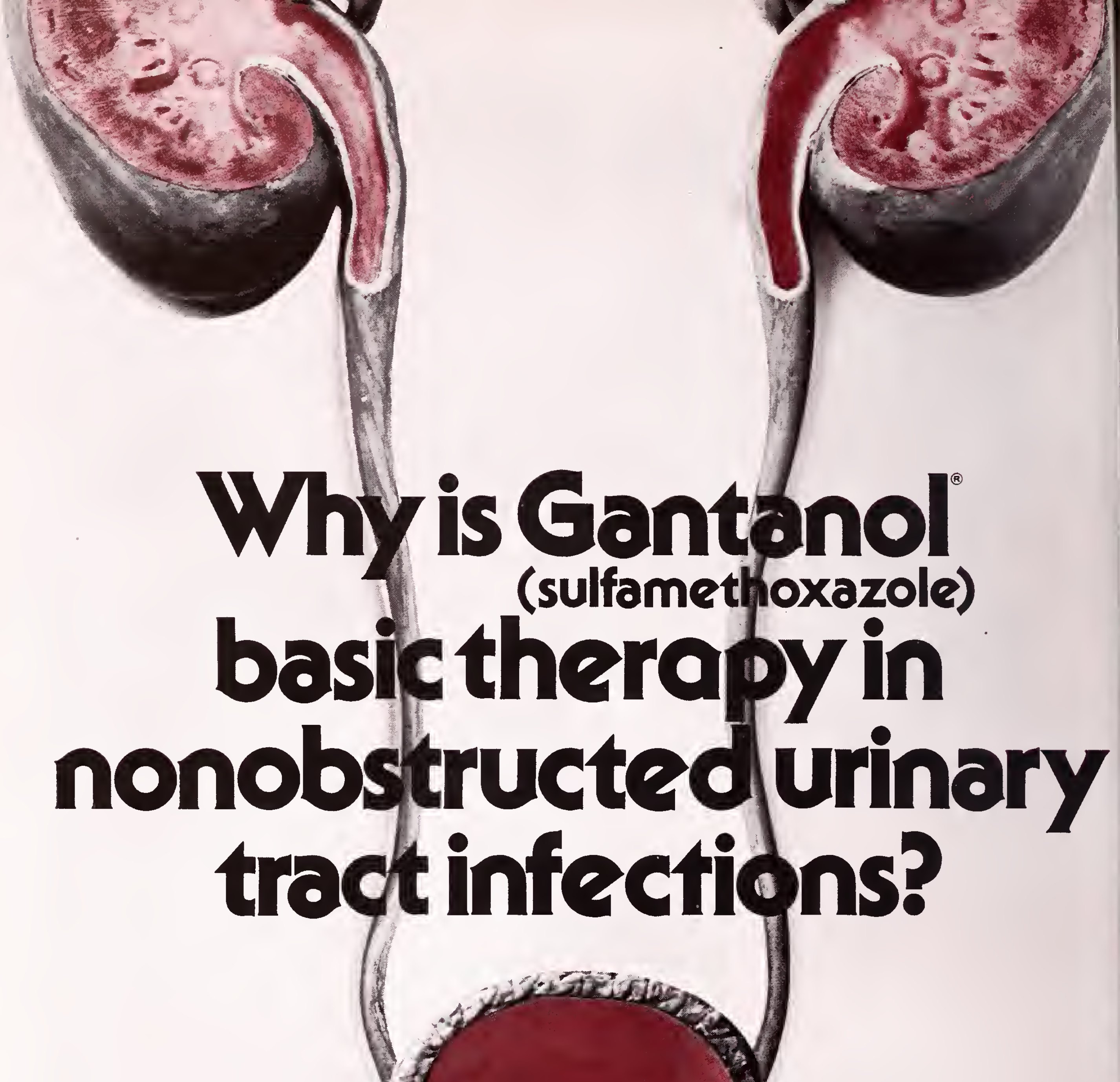

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pura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

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MEETINGS

Jan. 20-24–Family practice review, co-sponsored by Michigan Academy of Family Physicians, Towsley Center, U-M, Ann Arbor.*

Jan. 22–The MSMS Council, MSMS headquarters, contact: Warren Tryloff, director.

Jan. 31-Feb. 2–71st Annual AMA Congress on Medical Education, Palmer House, Chicago, contact: Division of Medical Education, American Medical Association, 535 N. Dearborn, Chicago, 60610.

Feb. 3-7–American College of Physicians postgraduate course on current concepts in oncology, cosponsored by U-M Medical Center, at Towsley Center, Ann Arbor, contact: ACP, 4200 Pine St., Philadelphia 19104.

Feb. 12–Obstetrical and Gynecological Medical Symposium, sponsored by Lansing Ob-Gyn Society, Michigan Society of Ob-Gyns, E. W. Sparrow Hospital, MSU College of Human Medicine and Continuing Education Service, at Kellogg Center, East Lansing, contact: Thomas Kirschbaum, MD, 178 Giltner Hall, MSU, East Lansing 48824.

Feb. 13–Continuing Pathology Conference, Towsley Center, U-M, Ann Arbor.*

Feb. 18-20–Postgraduate course in EKG diagnosis, U-M Medical Center, Ann Arbor.*

Feb. 20-22–Otorhinolaryngology conference, U-M Medical Center, Ann Arbor.*

Feb. 25-28–Postgraduate course in emergency medicine, U-M Medical Center, Ann Arbor.*

March 5-6–Postgraduate course in advances in pediatrics, U-M Medical Center, Ann Arbor.*

March 10-11–Postgraduate course on surgical complications, prevention and management, U-M Medical Center, Ann Arbor.*

March 12–The Council, MSMS headquarters, contact: Warren F. Tryloff, director.

March 14-15–Tenth Annual Michigan Conference on the Medical Aspects of Organized Athletics, to be held in conjunction with the Great Lakes Athletic Trainers Association's annual meeting, Ann Arbor Inn, contact: Helen Schulte, MSMS headquarters.

March 20-21–Postgraduate course in morphology of the blood and marrow, U-M Medical Center, Ann Arbor.*

March 26-27–1975 Annual Michigan Conference on Maternal and Perinatal Health, Civic Auditorium and Pantlind Hotel, Grand Rapids, contact: Helen Schulte, MSMS headquarters.

March 31-April 2–OB-Gyn Conference, U-M Medical Center, Ann Arbor.*

April 7-May 2–Surgical Anatomy Review, Towsley Center, U-M, Ann Arbor.*

April 10–Continuing Pathology Conference, Towsley Center, U-M, Ann Arbor.*

April 16–Orthopedics in Family Practice, Towsley Center, U-M, Ann Arbor.*

April 16–Postgraduate course on orthopedics in family practice, U-M Medical Center, Ann Arbor.*

April 17-18–Course on medical technology/hematology, U-M Medical Center, Ann Arbor.*

April 21-25–American College of Physicians postgraduate course on recent progress in clinical endocrinology, co-sponsored by U-M Medical Center, at Towsley Center, Ann Arbor, contact: ACP, 4200 Pine St., Philadelphia 19104.

April 24-25–International conference on andrology, "The Human Semen and Fertility Regulation in the Male," at Wayne State University School of Medicine, contact: E.S.E. Hafez, PhD, WSU School of Medicine, 550 E. Canfield, Detroit 48201.

April 24-26–Meeting of the Midwestern Association of Plastic Surgeons, Shiawassee Hotel, Southfield, contact: Burns Newby, MD, 20905 Greenfield, Southfield 48075.

April 28–Continuing Pathology Conference, Towsley Center, U-M, Ann Arbor.*

April 28-29–Human Sexuality Workshops, Towsley Center, U-M, Ann Arbor.*

May 1-2–Ophthalmology conference, U-M Medical Center, Ann Arbor.*

May 1-2–Eighteenth Annual Clinic Days, Children's Hospital of Michigan, co-sponsored by WSU School of Medicine at the hospital, contact: Jeanne Lusher, MD, Chief of Hematology/Oncology Service, Children's Hospital of Michigan, 3901 Beaubien Blvd., Detroit 48201.

May 4–The Council, MSMS headquarters, contact: Warren Tryloff, director.

May 4-6–MSMS House of Delegates, Michigan Inn, Southfield, contact: Richard Campau, MSMS headquarters.

May 7–Medicine and law (Malpractice) for physicians, Institute for Continuing Legal Education, Towsley Center, U-M, Ann Arbor.*

May 13-14–Postgraduate course in therapeutics, U-M Medical Center, Ann Arbor.*

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In Patients over 20 Years of Age

Surgical Correction of Congenital Malformation Of the Heart and Great Vessels

By Lorenzo Gonzalez-Lavin, MD; Rodolfo Neirotti, MD; J. Keith Ross, FRCS, and Donald R. Ross, FRCS, London

Abstract

One hundred and twenty-two adults with congenital heart defects underwent total correction at the National Heart Hospital in London, between July, 1964 and July, 1971. Half of the patients had a secundum type of atrial septal defect. Tetralogy of Fallot, coarctation of the aorta, ventricular septal defect, pulmonary stenosis, ostium primum and patient ductus arteriosus were found in decreasing order of frequency. In 47% of the patients the diagnosis of the heart defect was made in adulthood. Hospital mortality for the entire group was 7.4%. Over 90% of the survivors have shown considerable clinical improvement and it must be assumed that their life expectancy has been prolonged. These results indicate the wisdom of correcting congenital malformations of the heart and great vessels regardless of the patient's age and should reduce the reluctancy of some physicians to recommend operation for patients with repairable defects.

Total correction of most cardiovascular anomalies has been accomplished within the last decade and, as the life span of most patients with congenital heart defects is relatively short, early surgical repair is now advocated.[1 2 3 4 5 6] In some instances, however, the diagnosis is not promptly made, and this group of patients with uncorrected congenital heart defects reach adulthood. Prolonged abnormal hemodynamics predispose increased pulmonary vascular obstructive disease, atrial fibrillation, atherosclerosis and calcification, and in the group with cyanotic defects, to the development of important collateral bronchial circulation. These superimposed conditions alter the clinical picture and present distinct problems in the surgical treatment that deserve special attention.

Table I.
Congenital Cardiac Defects in 122 Adults: Prevalence

Defect	Number Patients	Percent of Total
Atrial Septal Defect	61	50
Tetralogy of Fallot	18	15
Coarctation of the Aorta	16	13
Ventricular Septal Defect	10	8
Pulm. Stenosis with/without PFO	7	6
Ostium Primum	5	4
Patent Ductus Arteriosus	4	3
Aneurysm of Valsalva's Sinus with ASD	1	1

PFO = Patent Foramen Ovale
ASD = Atrial Septal Defect

The purpose of this communication is to report our experience in the surgical correction of congenital cardiovascular anomalies in the adult patient.

Clinical Material

One hundred and twenty-two patients with congenital heart defects and 20 years of age or over, were operated upon at the National Heart Hospital in London between July, 1964 and July, 1971. The eldest patient was 64 years of age. The various anomalies and their prevalence are shown in *Table I*. The clinical material is presented according to each anomaly.

Atrial Septal Defect

Sixty-one patients presented with a secundum type of atrial defect. The defect was discovered

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From the Department of Surgery, Institute of Cardiology and National Heart Hospital, London, England. Doctor Gonzalez-Lavin is now head of the Division of Cardiothoracic Surgery, Michigan State University.

Address all communications to: Lorenzo Gonzalez-Lavin, MD, Department of Surgery, Michigan State University, East Lansing, 48824.

Scientific Articles

Table II.
Atrial Septal Defect: Postoperative Morbidity

Complication		Number Patients
Cardiac Arrhythmias:		24
Atrial fibrillation	18	
Nodal rhythm	3	
Paroxysmal atrial tachycardia	2	
Ventricular ectopics	1	
Respiratory		3
Bleeding requiring re-exploration		2

during childhood in 25 patients, in the other 36 patients, the diagnosis was made during their adult life. Thirteen patients were in Class I and in all, the shunt at the atrial level was calculated larger than 2.5. Ten patients were in Class II, 14 in Class III, and the other 24 in Class IV.[7] Among this latter group five patients had angina on effort. Eighteen patients were in atrial fibrillation prior to operation. Three patients had undergone a previous operative procedure to close the atrial septal defect (two under hypothermia and the other with inflow occlusion).

Closure of the atrial septal defect was performed utilizing normothermic high flow cardiopulmonary bypass. Associated valvular lesions were found in four of the patients, two with aortic stenosis and two with rheumatic mitral stenosis. A pericardial patch was used in 27 instances to close the defect or to redirect inflow from the inferior vena cava or anomalous pulmonary veins. In the other 34 patients the defect was closed by direct suture.

The one hospital death occurred in a 60-year-old man who succumbed to sudden ventricular fibrillation seven days after operation (1.6% hospital mortality).

Cardiac arrhythmias were common in the early post-operative period, occurred in 24 patients (40%) (*Table II*), and were treated with digitalis or electrical pacing.

Clinical evaluation of the surviving patients disclosed a marked symptomatic improvement in all patients who were in Class II and III prior to surgery. Among the 23 surviving patients who were in congestive failure before the operation, 15 improved to Class II. Five others, although improved, continued to have dyspnea on effort and fatigue. The other three patients in Class IV showed little symptomatic improvement and continued to have frequent supraventricular arrhythmias.

Tetralogy of Fallot

Eighteen patients presented with tetralogy of Fallot. All were cyanotic and symptomatic with tiredness, fatigue, effort dyspnea and limited exercise tolerance. Sixteen had been diagnosed during childhood by cardiac catheterization. In the other two, the diagnosis was suspected but not confirmed until adulthood. Previous palliative procedures had been performed in nine patients; six Blalock-Taussig shunts; two Brock procedures and one Pott's anastomosis.

Total correction was performed in all 18 patients; in 12, reconstruction of the right ventricular outflow tract was required. In seven of these, a pericardial gusset was used to enlarge the outflow tract, and in the other five, a preserved aortic homograft valve with a portion of the ascending aorta was used as previously described.[8]

There were three hospital deaths. Two patients died in low cardiac output refractory to all treatment; in both an aortic homograft had been required to reconstruct the right ventricle. Clinical evaluation of the survivors indicated marked clinical improvement with minimal effort dyspnea in only two patients.

Coarctation of the Aorta

In this series, 16 adults presented with coarctation of the aorta. Only six had been diagnosed during childhood. All 16 patients had arterial hypertension, 11 were symptomatic with headaches, breathlessness and/or leg cramps. In all, the coarctation was in a juxtaductal location. Associated lesions were found in 10 patients; intercostal artery aneurysms were present in five, aortic valve disease in four, and one other patient had aneurysmal dilatation of the descending aorta.

Resection of the coarctation and end-to-end anastomosis was possible in 12 patients. A Dacron patch angioplasty was performed in two using the technique described by Moor, Ionescu and Ross,[9] while in another patient a long coarctation was excised and continuity re-established with a Dacron tubular graft. Left heart bypass was used in the patient who had the descending aortic aneurysm. Resection and grafting were performed. Intercostal artery aneurysms were suture ligated in all the five instances. There was no hospital mortality nor morbidity.

Ventricular Septal Defect

Ten patients were operated upon for isolated ventricular septal defect. In eight, the diagnosis was made during childhood. Five patients were symptomatic with breathlessness, fatigue and frequent respiratory infections. Moderate pulmonary hypertension (Pulmonary Artery Pressure $>$ 50 mm. Hg.) was present in all five. Two of them had a bi-directional shunt. In the five asymptomatic patients, the left to right shunt was 2.5. In two of the 10 patients, a 40 mm. Hg. gradient was found across the right ventricular outflow tract.

Three patients died during the postoperative period, one due to neurological complications. One patient with a bidirectional shunt died in low cardiac output 48 hours after repair. The third patient died suddenly on the 15th postoperative day; the surgical repair was intact at postmortem examination, an arrhythmic episode was postulated.

Clinical evaluation of the survivors disclosed that all seven patients were asymptomatic, six months to four years after surgery.

Pulmonary Stenosis With/Without Patent Foramen Ovale

Severe pulmonary stenosis was diagnosed in seven patients, five of them during childhood. All were symptomatic. Breathlessness and intermittent cyanosis were the most frequent complaints. Two gave a history of effort angina.

Right ventricular pressures were above 120 mm. Hg. and the gradient across the valve or infundibulum was above 80 mm. Hg. in all seven patients.

A large patent foramen ovale found in five of the patients was closed at operation. The pulmonary stenosis was valvular in origin in five, infundibular in one, and combined in the other. An open pulmonary valvotomy was performed in five patients. One patient required infundibular resection and Dacron patch enlargement of the right ventricular outflow tract. In the other patient, in whom a previous valvotomy proved ineffective because of hypoplasia of the right ventricular outflow tract, a homograft aortic valve was used in the reconstruction. This patient was unable to "come off bypass" and was the only death in the group. All the survivors have remained asymptomatic.

Ostium Primum

Ostium primum defects were found in five patients. Three had been diagnosed during childhood. All were symptomatic; the most common complaints were shortness of breath, tiredness and palpitations. One patient was in atrial fibrillation. Moderate mitral regurgitation was present in all.

During cardiopulmonary bypass a cleft mitral valve was sutured in all five patients. The primum defect was then closed with a Dacron patch. A cleft tricuspid valve was sutured in one patient and a pulmonary valvotomy was performed in one other. An arrhythmia caused the one hospital death. All survivors have shown marked clinical improvement.

Patent Ductus Arteriosus

Four adults were operated upon for a persisting ductus arteriosus, although two had been diagnosed in childhood. All the patients complained of breathlessness. In each, the ductus was divided and sutured. In one patient with a calcified ductus, left heart bypass was utilized as a precautionary measure. No mortality nor morbidity occurred in this group.

Table III.
Congenital Cardiac Defects in 122 Adults: Time of Diagnosis.

Defect	Childhood	Adulthood
Atrial Septal Defect	25	36
Tetralogy of Fallot	16	2
Coarctation of the Aorta	6	10
Ventricular Septal Defect	8	2
Pulm. Stenosis with/without PFO	5	2
Ostium Primum	3	2
Patent Ductus Arteriosus	2	2
Aneurysm of Valsalva's Sinus with ASD	0	1
TOTAL	65 (53%)	57 (47%)

Ruptured Aneurysm of Valsalva And Atrial Septal Defect

One patient presented with an aneurysm of the right sinus of Valsalva ruptured into the right atrium and a secundum type of atrial septal defect. Successful total correction was accomplished utilizing cardiopulmonary bypass.

Comment

Congenital anomalies of the heart and great vessels, although commonly diagnosed during infancy and childhood, continue to be an important cause of heart disease in adults.[10,11,12,13,14,15] In almost half (47%) of the patients in this study the diagnosis was made in adulthood. *(Table III)* Failure to consider the possibility that symptoms related to the cardiovascular system may be the basis of congenital heart disease has resulted in long delays in correcting repairable anomalies in these patients. Prolonged abnormal hemodynamics usually predispose complicating conditions that, in turn, create distinct surgical problems.

Atrial septal defect is one of the commonest forms of congenital heart disease and was by far the most common anomaly in this study. Although these patients may have a long life expectancy, some die prematurely and many more become increasingly symptomatic with age.[16,17] Repair of the defect can be accomplished with a low mortality rate (1.6% in this series) yielding a great improvement in the patient's symptoms.

Patients undergoing total correction of tetralogy of Fallot represent a more challenging group; the severity of the malformation is definitely ac-

Table IV.
Congenital Cardiac Defects in 122 Adults: Hospital Mortality.

Defect	Number Patients Operated	Number Patients Deaths
Atrial Septal Defect	61	1
Tetralogy of Fallot	18	3
Coarctation of Aorta	16	0
Ventricular Septal Defect	10	3
Pulm. Stenosis with/without PFO	7	1
Ostium Primum	5	1
Patent Ductus Arteriosus	4	0
Aneurysm of Valsalva's Sinus with ASD	1	0
TOTAL	122	9 (7.4%)

centuated in adults, as seen in our experience where 12 of 18 patients required reconstruction of the right ventricular outflow tract with either a pericardial patch or an aortic homograft valve. The experience of others corroborates these findings.[18,19] In addition, the abundant collateral circulation accounts for the increase in postoperative morbidity. Deaths in this group were usually related to technical problems. However, reports of larger series have shown that total correction can be accomplished with similar mortality as in childhood.[20]

Adult patients with coarctation of the aorta also present distinct technical problems: calcification of the vessel wall and aneurysmal formation of the aorta or the intercostal arteries are common findings. Nevertheless, with careful surgical technique and hypotensive anesthesia, repair of the coarctation can be accomplished with a low mortality and morbidity.

Correction of a patent ductus arteriosus or an isolated ventricular septal defect should be undertaken with the same considerations as in childhood. Awareness of the possibility of calcification of the ductus is important as this complication is more frequent with advanced age.

This study confirms the reports of others.[10,12,14,17] Patients with congenital malformations of the heart and great vessels have increasing symptomatology and disability as they grow older. Surgical correction should be advocated unless obvious contraindications exist. Our group of patients tolerated major surgery quite well. *(Table IV)* The hospital mortality is comparable to that in patients operated upon during childhood.[21,22,23,24] The results obtained in this studv are also comparable to that of the other series.[10, 14] The overall results have been most gratifying as over 90% of the survivors have shown considerable clinical improvement and it must be assumed that their life expectancy has been prolonged. These findings indicate the wisdom of correcting congenital malformations regardless of the patient's age and should reduce the reluctancy of some physicians to recommend operation for patients with repairable defects.

Acknowledgement

We would like to thank Mrs. Beverly Zell for her help in preparing this manuscript.

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(Continued on Page 18)

In submitting this article the author notes "As you are aware, gonorrhea remains one of our major health care problems that continues to increase in numbers despite a variety of programs. If it is to be controlled, a variety of changes must take place. I think it would be helpful to point out some of the recent changes in thinking about gonorrhea control and hope that it may cause a change in the approach to this problem."

Gonococcal Urethritis —1974

(The following article is in a classification of its own. Not strictly scientific in nature, it also advocates specific courses of action. However, it deals with a medical subject, is timely and contains good information about the latest methodology in gonorrhea control. It is thus presented here in the scientific section of Michigan Medicine. *John W. Moses, MD, Scientific Editor)*

By Jeffrey K. Stross, MD
Ann Arbor

Gonorrhea is pandemic and is the most commonly reported communicable disease in the United States with over two and one-half million cases occurring annually. In Michigan, over 31,000 cases of gonorrhea were reported in 1973, and statistics compiled in 1974 show an additional 10% increase in the number of cases reported to date. Recent clinical studies have caused physicians to re-examine previous concepts of gonorrhea and its control and may provide the information necessary to eradicate this major health problem.

Gonorrhea is difficult to control for a variety of reasons. Epidemiologic studies have stressed that the difficulty is due to the large reservoir of asymptomatic female carriers (as high as 80% of cases). However, recent studies stress the importance of asymptomatic male carriers, as 40% of asymptomatic male contacts of symptomatic females have positive urethral cultures.[1] Thus, asymptomatic gonorrhea probably occurs more frequently in males than commonly believed and this contributes to the difficulty in controlling gonorrhea. The failure of physicians to report gonorrhea also contributes to the problem of controlling it. Two of the major reasons cited by physicians for this failure are (1) they do not trust the confidentiality of health department records and personnel, and (2) they do not feel the information will be used productively for epidemiologic follow-up.[2]

There are many other reasons for the increasing incidence of gonorrhea. There is evidence to suggest that the more virulent organisms have been eliminated by treatment leaving behind less virulent ones, thus causing more asymptomatic illness. Changes in attitudes and behavior have been reflected by changes in sexual practice. These factors together with improved methods of contraception have been instrumental in the rapid increase in this disease. The above mentioned factors, in addition to a larger population, increased mobility, poor diagnostic methods, and limited finances portent a bleak future for the successful control of gonorrhea.

Adding to these problems is the tremendous increase in other forms of urethritis. A recent study of college students revealed that only eight per cent of those presenting with urethritis had positive cultures for gonorrhea.[3] Many of these students (76 per cent) had positive cultures for T-strains of Mycoplasma, as did a significant percentage of their control population(27 per cent). Additional studies by Richmond[4] and Handsfield[5] have shown convincing proof of the role of Chlamydia as the causitive organism in nonspecific urethritis. They isolated the organism in 36-45 per cent of cases while their controls were positive 3-6 per cent of the time. Attempts at delineating other causes have been unrewarding as fungi, trauma and allergies have all been investigated without conclusive findings. It appears now that nonspecific urethritis may be an expression of infection with several organisms, and that Chlamydia is pathogenic while the role of Mycoplasma is uncertain.

In an attempt to reduce the incidence of gonorrhea, National Gonorrhea Control Programs have been instituted. These programs have been underway for two years and have three major elements: (1) routine gonorrhea cultures to detect asymptomatic female carriers, (2) follow-up interviews with symptomatic male patients to identify and treat contacts, and (3) public information and professional educational programs. The number of cases reported has increased and the male:female ratio of cases has decreased in those areas where these control programs are in effect. These programs, while helpful, have not had the desired impact and consequently may be phased out in the

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future. The reasons for this are many and include the failure to follow-up on asymptomatic male patients, and ineffective public and professional educational programs.

If gonorrhea is to be controlled, a number of changes must take place.

I. Diagnosis

A. A more sensitive screening test must be developed for gonorrhea to ensure rapid, efficient and economical detection of asymptomatic carriers. Serologic tests have lacked specificity and sensitivity with a high number of false positive results due to cross reactivity with other Neisseria species. The prevalence of antibodies is highest in women with recurrent infection; and in those women with no history of previous infection, antibody titers increase as the length of time from exposure increases. Further refinements of these serologic tests may allow them to be the screening procedure needed as in syphilis where the VDRL has proved to be so useful.

B. Until a more sensitive screening test has been developed, the practice of obtaining screening cultures at the time of pelvic examination must be expanded so that it becomes a routine, like the Pap smear. In Michigan, culture medium is available at no cost from the state health department as is identification of organisms. The percentage of positive cultures varies from 1-30% depending on the patient source and follow-up of their contacts has revealed over 50% to be infected. This is a significantly higher yield than with Pap smears and the disease diagnosed can easily be cured with appropriate antibiotics.

C. In those patients presenting with signs and symptoms of urethritis, a concerted effort must be made to arrive at the proper diagnosis. Those patients with nonspecific urethritis must be identified and treated appropriately. Many of these patients have been mistakenly diagnosed as having gonorrhea and their failure to respond to penicillin may account for a significant number of "treatment failures." Because of the present difficulty in culturing Chlamydia and Mycoplasma, the diagnosis of nonspecific urethritis will remain one of exclusion, however this should change in the future when newer diagnostic methods are available.

II. Reporting

Because of the problems encountered with reporting gonorrhea, and the magnitude of the epidemiologic effort if all cases were reported, it may not be feasible to control gonorrhea using present epidemiologic methods. Since existing laws may impede rather than facilitate gonorrhea control, they should be abolished. It should be the physician's responsibility to instruct patients on the nature of the disease and the need for follow-up and treatment of all sexual contacts. The patient would not have to identify contacts by name, but just inform them of their need to seek medical attention. If this is not possible, traditional follow-up by public health workers could be instituted. If patients and their contacts could be assured of confidentiality, they may seek treatment earlier, and the number of contacts may be reduced as would the morbidity.

III. Education

A variety of educational efforts will be needed to assist in decreasing the incidence of gonorrhea.

A. Patient

Those people with gonorrhea must be given information on how they contracted the disease and how to prevent reinfection. The initial office or hospital visit must be utilized as an educational session to provide the information mentioned above.

B. Public

Education, starting in schools, and also aimed at susceptible groups must be instituted. Innovative programs such as the recent television specials should be encouraged and widely distributed.

C. Physicians and Health Care Workers

Physician education must be reemphasized in continuing education courses. Medical schools must stress the recognition, treatment, and public health aspects of gonorrhea. Lastly, all health care workers must approach the patient with gonorrhea as they do other patients, and not make value judgments because of a diagnosis. With over two and one half million cases occurring annually, gonorrhea affects all strata of society, and they all deserve competent, compassionate care.

The approach to gonorrhea must be a multifaceted one as there are many aspects of the present programs that may have to be changed. Edu-

(Continued on Page 35)

Ethelene Crockett, MD, right, and daughter Ethelene Jones, MD

In a special series of articles beginning here, Michigan's female physicians reveal their thoughts on their status, have their statistical pulse taken, and present a distinguished gallery for a collective bow. ***Michigan Medicine****'s editor's hope the readers enjoy the special articles.*

Situation Improving, Say Michigan's Female Physicians

By Judith Marr
Managing Editor

When Joanne McKune, MD, Dearborn family practitioner, attempted to enter medical school in 1965, she was not accepted. The male medical school administrators told her they would not take her, she says, because she was married, had two children, and would have to commute to classes.

"Men believe you belong barefoot and pregnant, not in medicine," she says.

That there is still some strong feeling against women in medicine is verified by other women physicians in Michigan.

"I think it's ironic there are more foreign physicians in the U.S. than woman MDs practicing," says Ethelene Crockett, MD, Detroit obstetrician-gynecologist. "I think it's an indictment of our so-called democratic and developed society."

"The same problems apply to women as to blacks," says Doctor Crockett. "For decades they've been discriminating us away from medicine, and persons tend not to try something that may be impossible in the end."

Marilyn Heins, MD, associate dean for student affairs, Wayne State University School of Medicine, tells of a straight-A female student from another university who just one year ago was encouraged to try medical technology rather than medicine when she expressed an interest in the health field.

"I believe we still have a sexist society," says Doctor Heins, a NOW member.

"My male classmates in medical school told me I was crazy, that I would get married, have kids and never practice," comments Cecelia Hissong, MD, Dearborn, first woman president of the Michigan Academy of Family Physicians.

But, agree all four, the situation is improving.

"I was a phenomenon when I got into medicine 30 years ago," notes Doctor Crockett. "It's a bit easier for women now."

"There's also a movement among some patients to look for female MDs, feeling that men are not sympathetic or empathetic enough," notes Doctor Crockett.

"In recent years, women have made greater strides in getting into medical school than ever before," says Doctor Heins. "At WSU now we have over 15% enrollment of women." The national average is 15.4%, according to a July, 1974 New York *Times*. Michigan State University had no overall figures available at the time of this printing, but 39% of the freshmen medical class is female. At the University of Michigan, 24.2% of the total medical school enrollment is female.

National figures show women medical students have doubled in numbers over the past three years and now make up 20% of the total enrolled in first-year medical school training. Women are applying in greater numbers, says the NY *Times*,

Doctor Heins

Doctor Hissong

because of the impact of the feminist movement and anti-discrimination laws.

Whatever the statistics, Doctors Crockett, Hissong, McKune and Heins believe medicine is a great field for women.

"I think medicine is a particularly terrific place for women. There are so many things to do within the field," says Doctor Hissong. "In addition, it's fairly easy to arrange things if there are family or children involved, and you're your own boss."

But the problem still exists of living multiple roles as professionals, wives and mothers.

"There really are no helps out here," says Doctor Crockett, who together with husband George W. Crockett, Jr., Detroit Recorders Court judge, has raised three children. Her youngest daughter, Ethelene Jones, MD, is an obstetrician-gynecologist sharing the office with her mother.

More day care centers are needed, says Doctor Crockett, as well as more financial help.

"It's a lot of work," agrees Doctor Heins, mother of Rachel, 15, Jonathan, 13, and wife of M. P. Lipson, DVM. "I've had 16 years of leaving things undone at home and at work — feeling guilty as I drove to work and guilty as I drove home.

"My experience of six months of combining marriage and profession," agrees newlywed Doctor Hissong (husband Ray Kruger is in business), "is that it can be rough at times. There are more demands on you than when you're single.

"If I were just in practice there would be no problem. But I'm at so many night meetings with Academy work, it takes away from the time we're together and adds to his burden at home."

Doctor McKune strikes a balance between family and profession through group practice, the arrangement of a number of female Michigan physicians. She has two children — a boy, 16 and girl, 13, and her husband is with the Ford Motor Co.

"This is a very demanding field — it's difficult on family life. Unfortunately I didn't see much of my family while I was in training," she says. "My husband was a great help. I couldn't have done it without him."

The four woman MDs declined to set themselves apart from other women.

"I feel a great kinship and sisterhood for all women," says Doctor Heins, who entered medicine after a schoolday fascination with psychiatry. "We've all been put through cultural discrimination."

"Women doctors are not different from other women," says Doctor Crockett. "There's no question I'm a female — I have no problem."

Different from other women? Perhaps not. They are, however, bucking a long tradition.

In an article, "Attitudes Toward Women Physicians," published in the February, 1974 issue of the *Western Journal of Medicine,* author Edgar G. Engleman, MD, Bethesda, reported that 96% of his sample of 500 clinic patients felt a "typical" MD was a man, and 78 percent expressed a preference for a male doctor.

A significant number of patients said they would be unwilling to discuss certain subjects with a woman doctor or to follow her advice. Women physicians were considered less competent and less experienced than their male counterparts. Patients who previously had consulted women physicians were more favorable toward them, however.

"Some people act a little hesitant because I'm a woman," acknowledges Doctor Hissong. "But once patients and doctors realize I know what I'm doing and I'm going to do well, I find tremendous acceptance.

"I'm sure some doctors find me threatening," adds Doctor McKune. "But they usually come around. And patients accept me well."

"I would hope there would be some changes as more women become physicians," says Doctor Heins.

That July New York *Times* predicted that with more women medical students there will be greater pressure for more female teachers in medical schools and greater flexibility in medical education to allow women and men to balance family and study responsibilities.

With the increase of women in medical practice, the *Times* article continued, there might develop more emphasis on doctors practicing in groups, women patients might find more of their own sex to go to, and medicine might become more compassionate.

"I believe the public will expect the same kinds of excellence from physicians whether they are male or female," says Doctor Crockett. "But in certain fields, women will expect more empathy from woman doctors."

"I happen to think women doctors have a responsibility to women," declares Doctor Heins. "I think women doctors can help (1) in consciousness-raising, (2) as role models, and (3) in eliminating some of the sexist practices from medicine.

"I've said a long time we should let no one graduate from medical school who has not had major surgery, severe depression and a baby — you're not a good, competent doctor until you've had all three!"

Doctor Heins reports general agreement among the several female associate and assistant deans of U.S. medical schools (there are no females at the top post) that they are treated patronizingly, humored or ignored.

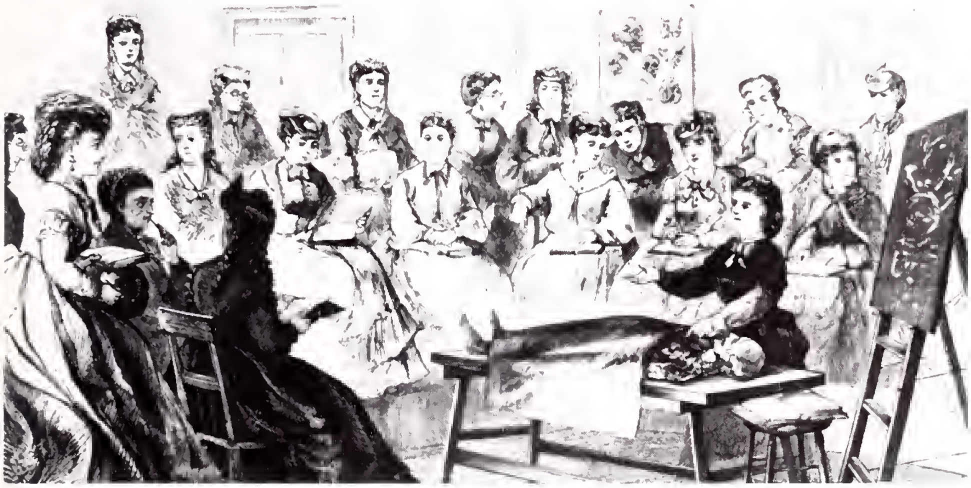
"We agreed while in medical school and in practice, things are bearable. But the higher you go in male circles, the more difficult it becomes. And it's going to get worse unless positive affirmative action is taken."

"I am pessimistic about change," she says. "I don't think there will be any real changes until we raise our sons differently. They have to accept women as human beings, not sex objects or wives."

"There are not enough women in organized medicine," says Doctor Hissong. "But on the whole, that's the women's fault, not the men's. You've got to get in there and do the work. I think there is some discrimination, but if more women would take on responsibility . . ."

"I was discriminated against many times by a number of people," says Doctor McKune. "But once I had made up my mind, I was not discouraged. I like people. I feel this is a way to help them and I feel this is important. It's an excellent field for women.

"Medicine is really a woman's profession," comments Nina Woodside, MD, director, Center for Women in Medicine, in the Sept. 30 *American Medical News*. "Women have traditionally been the caretakers, the healers, the midwives. Given time and the proper indoctrination, women will begin mixing this natural proclivity with their increased status, and the result will be more women in the decision-making roles they are entitled to — in government, administrative, and certainly faculty positions."



Female doctors-to-be watch an anatomy lesson at the New York Infirmary Women's Medical College, founded in 1867, and one of the first to offer a doctor of medicine degree to women. It remained in existence for thirty years, until Cornell Medical College opened its doors to women in 1898.

Michigan's Women in Medicine — Their 'Vital Statistics'

How many women physicians are there today in Michigan?

The answer is 1,087, or approximately 10% of the total of 10,767. That number is up some from the 1,026 of February, 1974. Nationally, there are over 30,000 female physicians, and they are 9% of the total. They have increased in numbers more than three fold in the last decade.

The largest number, or 197, of Michigan female physicians are in pediatrics. The next most popular specialties, in decreasing numbers, are internal medicine, 158; psychiatry, 109; general practice, 103; ob-gyn, 97; pathology, 78; anesthesiology, 58, and radiology, 36.

Approximately 90% of Michigan's female physicians are in patient-care, closely correlating with the national average. The state numbers and kinds of practice are as follows; non-government hospital, 341; solo, 155; group, 75; medical school, 60; state government hospital, 40; city/county government hospital, 38; partnership, 37; VA, 29; arrangement (non-group), 27; state government, 18; city/county government, 16; other federal agencies, four; U.S. Public Health Service, two; other, 19, and no classification, 226.

American Medical News, in its Oct. 28, 1974 issue, noted that more of the new women physicians seem to be entering teaching, medical administration or research, however, than patient care fields. The number of women in patient care has increased over the past decade 58.2%, but the percent in non-care fields more than doubled. This may bode changes in the balance.

Sixty-five percent of Michigan's women physicians are 45 years of age or younger, while 36 percent are 35 or younger, reflecting the increasing numbers of women physicians being graduated in recent years.

The number of women in medical schools has doubled across the country during the last three years, according to a New York *Times* article published in July, 1974. At that time, they numbered 7,824, or 15.4% of total medical students, as opposed to the 1971 total of 3,894, or 9.6%. Twenty-two percent of the national first-year enrollment is female.

For some years, said the *Times,* the percentage of women accepted by medical schools has been equal to that for men, and in September, the *American Medical News* reported that the first-year enrollment of women in medical schools was expected to top 20%.

Less than half, or 505 of Michigan's women physicians are graduates of U.S. medical schools, while 582 are graduates of Canadian and other foreign medical schools. Largest concentrations include 251 woman graduates of Michigan medical schools, 172 of Filipino medical schools and 132 of Indian medical schools. Others, in decreasing order, are from schools in Illinois, 45; Pennsylvania, 43; Korea, 32; Germany, 29; Thailand, 27; Ohio, 24, and New York, 21.

HEART SURGERY/*Continued*

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Some Background on the Blackwell Chapter, AMWA

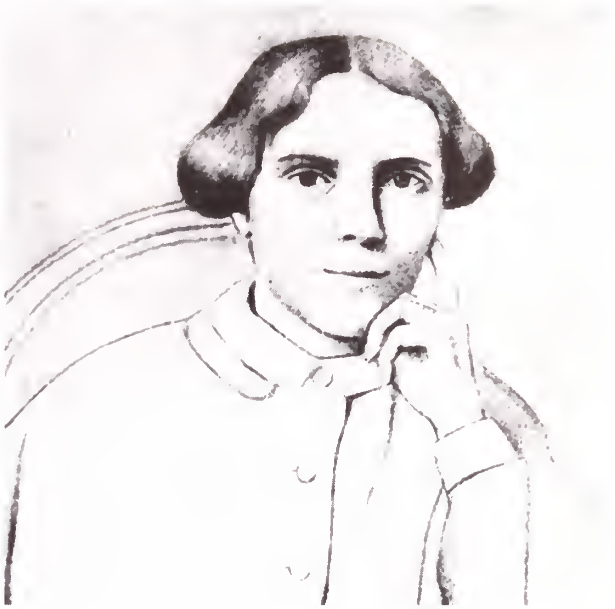
By Jean Sinkoff-Goldstein, MD
President, Blackwell Chapter, AMWA

The Blackwell (Michigan) chapter of the American Medical Women's Association has approximately 200 members.

Current officers are Jean Sinkoff-Goldstein, MD, Madison Heights, president; Elisa Cancino Samson, MD, Detroit, vice president and Delores Shelfoon, MD, Detroit, historian.

Our national organization was founded in 1915 in Chicago, by a small group of medical women under the leadership of Bertha VanHoosen, MD. In 1937, the organization became the American Medical Women's Association. The earliest beginnings of our local chapter were in the 1940's under the leadership of Esther Dale, MD, Viola Brecke, MD, and Avis Olson, MD.

The local Chapter was named after Elizabeth Blackwell, MD, who graduated from the University of Geneva, New York, and was the nation's first female physician.



Elizabeth Blackwell, MD

One of the prime goals of the Blackwell Chapter is recruitment of qualified, capable women for the medical profession. We are working to place a member of our organization on the Admissions Committee of Wayne State Medical School. We also are trying to organize all women physicians in Wayne, Oakland, and Macomb counties, but it has been extremely difficult with everyone's multitude of responsibilities. We have 60 active members from a total census in the area of 150.

It has been very hard for women to enter medical schools from initial career counselling in high school. Many advisors tend to encourage students into more traditional roles of paramedical or nursing fields. The medical schools generally have limited women to the 13 per cent figure in 1973, which is a great improvement from nine per cent in 1969.

In addition, it has been extremely frustrating in Michigan to obtain part time residencies for women in various specialties. Most young physicians with limited resources have found it almost impossible to obtain proper child care workers to assist them at home. Needless to say, there are no tax advantages for the employed female physician to hire household child care workers.

Other severe problems the Blackwell Chapter is concerned with are the extreme cost of medical education, which in most cases the student's family is unable to meet, and the difficulty in obtaining funding.

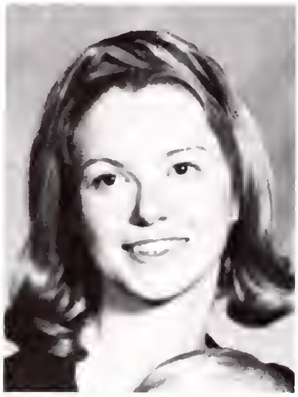
Our local group arranges monthly meetings. We also have a yearly combined medical and legal meeting and it is a great experience to learn from other professional women.

We hope our group will further interest the young physician in practice, who will join our group.

Doctor Sinkoff-Goldstein is a graduate of Wayne State University, and is in private practice. She is married to Bernard Goldstein, MD and they have three children, ages 9, 7 and 4. Dr. Sinkoff-Goldstein is active in Wayne County Medical Society and Oak Park Council Community Services.

Doctor Sinkoff-Goldstein

Distinguished Representatives of Michigan's Woman MDs


Doctor Anderson

Doctor Barrows

Doctor Carney

Doctor Cretens

Doctor Daly

Doctor Daugherty

Mary O. Anderson, MD, is current president of the St. Joseph County Medical Society, vice chairperson of the Michigan Area X PSRO Steering Committee, and secretary-treasurer of the Sturgis Hospital Staff. A graduate of the U-M Medical School, she established a family practice in 1970. She is the mother of three, sons 6 and 3 and a daughter under 1 year.

Winona Barrows, MD, retired in March as a tuberculosis consultant for southwest Michigan. Previously, she was superintendent and medical director, Southwestern Michigan TB Hospital. She now works with the Health Departments of Kalamazoo, Van Buren, Allegan, St. Joseph, Branch, Hillsdale and Berrien counties. "Doctors with a practical knowledge of tuberculosis seem to be in shorter supply than patients with the disease," she observes.

The president for the past four years, Mason County Medical Society is *Ruth V. Carr Carney, MD,* who has shared a Ludington practice with her husband, John R. Carney, MD, for 25 years. Doctor Carney is former Ludington Memorial Hospital chief of staff, served four years on the Ludington School Board and is a diplomate of the American Board of Family Practice. The Carneys are parents of three children. "It has been my privilege to work side by side with my husband in our chosen field and it has been largely due to his assistance and encouragement that I have been able to accomplish the aforementioned goals," she writes.

Mary L. Cretens, MD, MPH, has been medical director, Delta-Menominee District Health Department, for 13 years. Under her direction the district has developed an extensive family planning program, multiple screening programs for senior citizens, blood pressure screening for the public and school children and a urine screening program. She is a native of Gladstone, her present home, a graduate, U-M Medical School and member of numerous health organizations.

Miriam S. Daly, MD, ABFP, is the daughter of physicians; wife of Harold L. Daly, MD, FACS, Albion surgeon, and sister-in-law of Mary V. Daly, MD, Albion internist. Doctor Miriam Daly is chief of pediatrics, Albion Community Hospital; member, Calhoun County Medical Society executive board; preceptor, SAMA-MECO program and Cooperative Michigan Primary Care Preceptorship Program. She has been active in Girl Scouting for 29 years and is the mother of four.

Sandra A. Daugherty, MD, is an associate professor, Department of Medicine, MSU College of Human Medicine. She divides her time as teacher and principal investigator for the Hypertension Detection and Follow-up Program, underway at MSU in cooperation with the National Heart and Lung Institute. Doctor Daugherty is a former chief, Heart Disease Control Program, MDPH and serves on several Michigan Heart Association committees. She is married to Robert M. Daugherty, Jr., MD, PhD, and they have three children.

Doctor Gregory

Doctor Grundy

Doctor Habenicht

Doctor Haddy

Doctor Hutchinson

Doctor Lusher

Medical Director of the Ford Tractor Division, Romeo, *Gertrude B. Gregory, MD,* is the first female physician hired by the Ford Motor Co., and the first female to be sole physician at a Ford plant. She is a former teacher and cardio-pulmonary technician and was graduated from the WSU School of Medicine. Doctor Gregory is past president, Blackwell Branch of the American Medical Women's Association and is the mother of two.

Saginaw anesthesiologist *Betty L. Grundy, MD,* is listed in Who's Who of American Women. She's a diplomate, American Board of Anesthesiology and fellow, American College of Anesthesiologists. Doctor Grundy is chairman, Anesthesia Department, St. Luke's Hospital; chairman of the hospital's ICU and Pharmacy committees; former board member, Michigan Lung Association; founding member, Michigan Society of Critical Care Medicine and founding member, American Trauma Society. She's an assistant clinical professor of surgery with the MSU College of Human Medicine and the mother of one child.

Hilda Adella Habenicht, MD, Jackson, is a native of Argentina and has been in family practice in Jackson since 1943. She is a fellow, American Board of Family Practice; corresponding secretary of the Pan American Medical Women's Alliance, and member of numerous medical organizations. She was graduated from Loma Linda University medical school.

Pediatric hematologist *Theresa B. Haddy, MD,* associate professor in the Department of Human Development, MSU College of Human Medicine, has an extensive bibliography. She is a fellow, American Academy of Pediatrics; and former chief, Division of Child Health, Bureau of Maternal and Child Health, Michigan Department of Public Health. Formerly, she was assistant professor, University of Oklahoma; private practitioner in Illinois, and school physician for Minneapolis. She is a graduate of the University of Minnesota.

Assistant clinical professor with the Department of Medicine, MSU College of Human Medicine, *Elizabeth A. Hutchinson, MD,* also is a practicing dermatologist in Lansing. Her husband is Donald B. Kaufman, MD, and they are the parents of two children. Doctor Hutchinson was graduated from the University of California medical school. She is a member of the Michigan Dermatologic Society and the American Academy of Dermatology and is former assistant professor, UCLA Department of Medicine.

Jeanne M. Lusher, MD, Detroit, is director, Department of Hematology, Children's Hospital of Michigan. The pediatric hematologist/oncologist also is associate professor of pediatrics at WSU School of Medicine and senior research associate, Child Research Center of Michigan. She is involved in clinical research projects, is co-author of a new book, "Sickle Cell," and has recently presented scientific papers at several national and international meetings. She is a graduate of the University of Cincinnati. "I find my work extremely stimulating and interesting. The constant exposure to medical students is particularly rewarding, as they are, for the most part, quite interested, inquisitive, very bright, and a real stimulus to those of us who have the challenge of 'teaching' them," she reports.

Doctor McLain

Doctor Mulkey

Doctor Norgan

Doctor Peebles-Meyers

Doctor Powsner

Doctor Raven

Myrtle McLain, MD, Grand Rapids is a full-time emergency physician in Western Michigan. She is medical director of the Emergency Care Center at Saint Mary's Hospital, G.R., and is a charter member of the American College of Emergency Physicians. She is an assistant clinical professor of surgery with the MSU College of Human Medicine and is listed in Who's Who of American Women. Her husband is a computer programmer and they have six children.

Internist and rheumatologist *Dorothy M. Mulkey, MD*, is assistant dean, Flint Campus, MSU College of Human Medicine. She is a native of Jackson, a graduate of the WSU School of Medicine, and medical director of the Arthritis Foundation Volunteer Action Committee. She also is medical director of the Visiting Nurses Association.

A psychiatrist, *Anne F. Norgan, MD*, is first woman president of the Calhoun County Medical Society. In addition, she is director, Mental Health Unit and vice president of the general staff, Battle Creek Sanitarium Hospital. She is assistant professor, WMU Physician Assistant program; member, Task Force for Private Practice, Michigan Psychiatric Society, and past president, Western Michigan Psychiatric Association. A graduate of the University of Heidelberg medical school, she is a fellow, American Psychiatric Society and certified by the American Board of Psychiatry and Nuerology.

Marjorie Peebles-Meyers, MD, Detroit internist, was named "Outstanding Physician of the Year" (1968) by MSMS and one of the "Top Ten Detroit Women Who Work" (1968). A graduate, WSU School of Medicine, she received an honorary doctorate from CMU in 1969. She has served 11 years as WCMS delegate to MSMS and as alternate and delegate to the AMA from MSMS since 1967. She is past president, Michigan Diabetes Association, a member of the Mt. Carmel Mercy Hospital Executive Board, and on the advisory boards of the United Foundation, Detroit Urban League, Neighborhood Services Organization and Detroit Institute of Arts. She is clinical associate professor, WSU Department of Medicine and senior attending physician, Hutzel Hospital Department of Medicine.

"I am very happy the climate and attitudes towards women in professions are changing," writes *Rhoda M. Powsner, MD*, Ann Arbor cardiologist. She is active in committee work for Washtenaw County and Michigan State Medical Societies, is the wife of Edward Powsner, MD, and mother of four children. She is former chief of medicine at Beyer Hospital, Ypsilanti and is a clinical instructor, U-M Medical School. She is a fellow of the American College of Chest Physicians, the American College of Angiology, and the American College of Physicians.

Clara Raven, MD, is retired deputy chief medical examiner of Wayne County. She also is a retired colonel with the U.S. Army, for whom she was forensic pathologist during World War II and the Korean War. She was acting chief medical examiner of Wayne County and a practicing pathologist for 30 years. She is a member of the Governor's Health Advisory Council, past president of the Blackwell Chapter, American Medical Women's Association, on the boards of World Medical Relief, Inc., the Michigan Association for Sudden Infant Death, Inc., and the International Guild for Infant Survival, and was chosen one of the "Ten Top Working Women of Detroit" in 1966. She is a fellow of the College of American Pathologists, the American Society of Clinical Pathology, the American Academy of Forensic Sciences and the American Public Health Association. She is listed in Who's Who of American Men in Science, the Who's Who of American Women and is the recipient of the Alumnae Merit Award of Achievement of Northwestern University.

Doctor Rosenberg

Doctor Skufis

Doctor Tanner

Barbara Rosenberg, MD, is professor of pathology, WSU School of Medicine, and senior attending pathologist, Detroit General Hospital. In addition, she serves as consultant to the Allen Park VA Hospital, Harper and Hutzel hospitals. She is a graduate of the Yale School of Medicine, and is a member, International Academy of Pathology, American Association of Pathologists and Bacteriologists, Michigan Society of Pathologists, Detroit Surgical Association and Michigan Transplantation Society.

Her 'confrontation of interests' keeps *Eleanor Skufis, MD,* Adrian, current in both family practice and occupational medicine. "I enjoy both," she says. "I also take sufficient time to watch my (three) teenagers mature to responsible adults." Doctor Skufis practices industrial medicine half-days at the Tecumseh Fisher Body plant and family medicine at a birth-control-planned parenthood clinic Monday afternoons at the Lenawee County Building. She also serves as consultant for the Adrian Public Schools Head Start Program and for the Family Life Education Program at Adrian Training School. She is a former member of the Governor's Youth Commission. She is a graduate of the University of Michigan Medical School and married classmate Xenophon Skufis, MD, with whom she later established a family practice.

The main concern of *Natalia Tanner, MD,* Detroit, is the development of adolescent health services in the Detroit Medical Center. She is married to Waldo L. Cain, MD, FACS, and is the mother of two daughters. A pediatrician, she is an associate with Children's Hospital of Michigan, assistant clinical professor at WSU, member of the American Academy of Pediatrics Committee on Youth, the National Medical Association-AAP Liaison Committee and the Medical Advisory Committee of Planned Parenthood.

The director of the Breast Cancer Detection Center in Ann Arbor is *Barbara Ann Threatt, MD,* radiologist and also assistant professor with the University of Michigan Medical School. In addition she is chief of the mammography-thermography section, Department of Radiology, University of Michigan Hospital. She is married to Henry D. Appelman, MD, mother of two children and is a graduate of the Medical College of South Carolina.

Doctor Threatt

Doctor Westerberg

Martha Westerberg, MD, is a professor of neurology, University Hospital, Ann Arbor. She also is a consultant, Ann Arbor VA Hospital and Wayne County General Hospital. She is a diplomate, American Board of Psychiatry and Neurology; member, medical advisory board, Myasthenia Gravis Foundation; fellow, American Academy of Neurology, and member, American Neurological Association. A graduate of The University of Chicago School of Medicine, she is widowed and mother of five stepchildren.

Anna Hardy Broecker, MD, is a graduate, University of Toronto Medical School, and currently associate pathologist, Blodgett Memorial Hospital, Grand Rapids. She is secretary-treasurer, Kent County Medical Society and Kent Medical Foundation; assistant clinical professor, Department of Pathology, MSU. Doctor Broecker is a member, American Society of Clinical Pathologists, and Michigan Society of Pathologists. *(No photo available)*

Professor of pediatrics and nursing, the U-M Medical School, *Ruth H. Strang, MD,* is also director, pediatrics and pediatric cardiology, Wayne County General Hospital. She is sub-project director, Child and Youth Project, DMIC-PRESCAD Project; and co-director, Pediatric Nurse-Practitioner Program, U-M School of Nursing. She is a consultant in cardiology, Plymouth State Home and Training School. Doctor Strang is a fellow, American Academy of Pediatrics, American College of Cardiology, and New York Academy of Medicine. *(No photo available)*

Letters

Thoughts On Malpractice

To the editor:

Insurance should not be set up to take risks that cost the companies money.

Doctors are trained to evaluate facts, information and intuitions to arrive at one conclusion; to help patients and not do harm to them. In seemingly hopeless cases, certain risks are inherent in the treatments. These risks are explained to the patients and the patients have a choice of accepting these risks or not having the treatment.

Lawyers are trained to see all sides of a situation or event; to explain, prosecute or defend any one of the different sides or viewpoints.

Doctors understand why insurance companies can not provide services at a loss. It is, however, difficult for doctors to understand why an insurance company will readily accept yearly premiums for many years and then send a letter stating they will no longer insure the doctor. Doctors understand when insurance rates are raised. They do not think it fair to be cancelled out.

It is difficult for doctors to understand why they should be subjected to a threatened or actual law suit when a patient accepted a qualified treatment risk and no harm came to the patient from the treatment.

Possible solutions:

Doctors should be intelligent enough to band together in an effort to correct the current malpractice insurance situation, as patients will be benefited by the best treatments available.

Consider three possible solutions that could be initiated while we wait for state or national legislation which will provide that qualified doctors be able to obtain insurance to practice.

1. Local county or regional medical societies could collect $1,000 per doctor on the average each year. In Genesee County, the 350 doctors would thus put $350,000 in a separate corporation or fund. This could be put out at current interest rates of about 10% and would furnish $35,000 a year to aid in getting decent malpractice insurance through one of several methods.

2. State medical societies could do a better job than county or regional societies. Michigan State Medical Society with its 8,600 doctors averaging $1,000 apiece would collect $8,600,000 a year. This money, put out at current interest rates of 10% , would furnish $860,000 a year to set up and run an agency that would see that every qualified doctor could obtain malpractice insurance.

3. The American Medical Association with over 200,000 members could collect $1,000 apiece on the average which would amount to $200,000,000 a year.

This amount of dollars, at the current rate of 10% interest, would generate $36,000,000 a year. This amount could be used to set up a separate corporation or association to make sure that doctors could have adequate malpractice insurance.

Conclusions: A $1,000 collection from the doctors each year, to do the above, is not too much to collect. Doctors could continue their present malpractice insurance until the American Medical Association, preferably, or the government could be forced to create some type of corporation, association or a set of laws which would allow doctors to be insured against catastrophic happenings that occur.

Respectfully,
Hira E. Branch, MD
Flint

Kudos For Reference Card

To the Editor:

I just received reference card number 4 in the latest issue of *Michigan Medicine* with suggested standards of prenatal care. This is an excellent guide and you are to be complimented on the accuracy and thoroughness of this effort. If you would be nice enough to send me one of each of the other cards in this series, I would very much like to keep a complete set on my desk for handy reference.

Sincerely yours,
Louis R. Zako, MD

On Crib Deaths

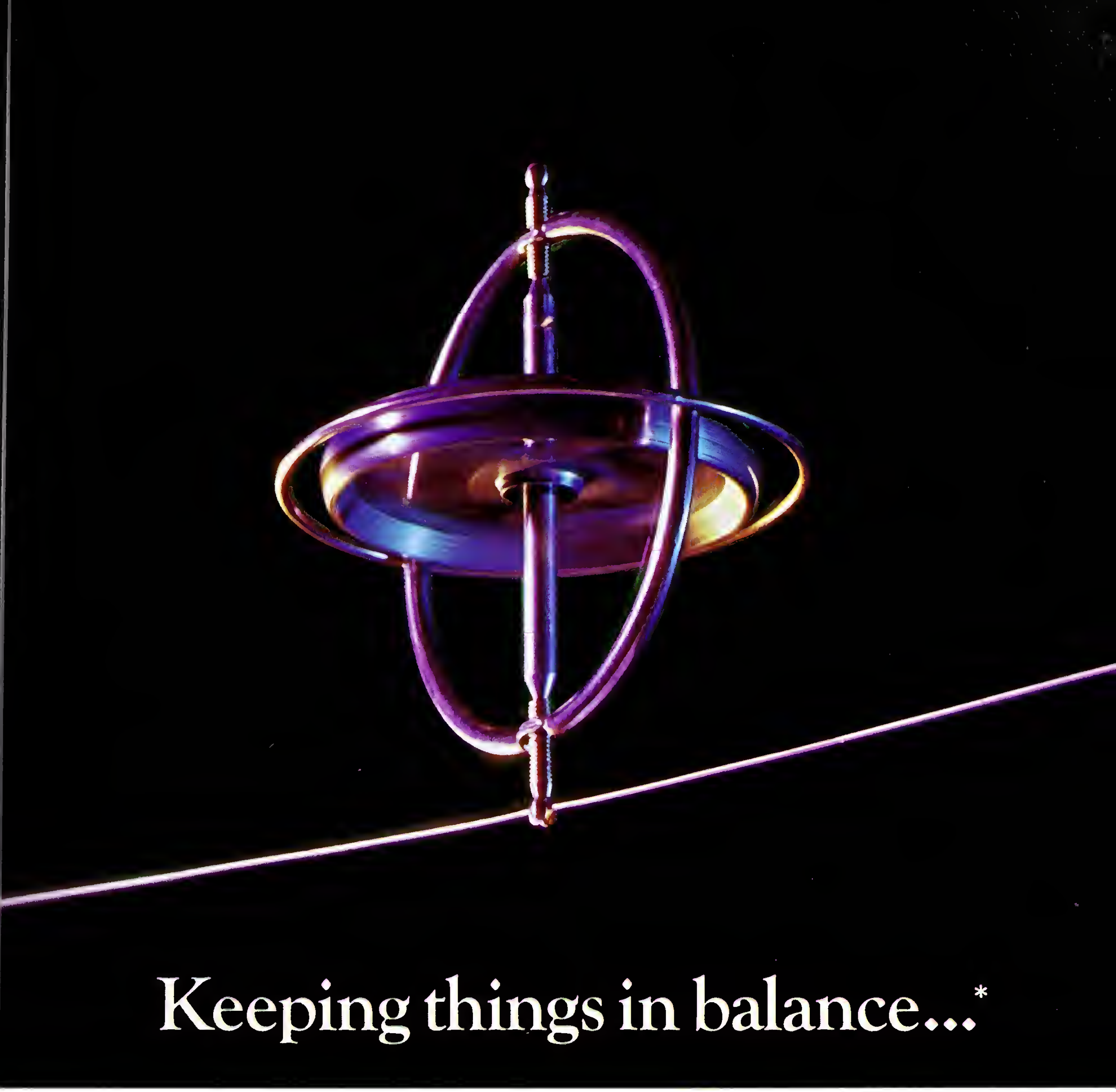
To the Editor:

I was very much interested in reading the article in a newspaper recently about two Michigan researchers who have come to the conclusion that crib death is caused by an air bubble trapped in the baby's windpipe (from a November *Michigan Medicine* article picked up by the wire service).

Enclosed find all my correspondence and ideas on the subject. I am sending similar copies to Dr. Kadlub. I think you will find them of some interest.

Thank you for your time.
Ruth K. Allien, R.N.

(Editor's Note: Following publication of "Crib Death – Disease or Accident?" by Karl J. Kadlub, PhD, and K. Gregory Kadlub, Battle Creek, the UPI contacted the authors and transmitted a wire story. The article appeared in hundreds of newspapers across the country. Late in November, Doctor Kadlub reported to MSMS offices that he had granted six radio interviews and three TV interviews, had answered numerous inquiries, including one from the London Sun-Times, and had received over 30 letters from mothers agreeing "that's it" to his theories. His wish in publishing had been to stimulate thought, discussion and possibly research among physicians, he explained.)



Antivert®/25 Tablets
(25 mg. meclizine HCl)

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children. Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy. See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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49 Continuing Medical Education courses at
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Those 49 Category I Continuing Medical Education courses are the largest number ever offered at an AMA convention. On top of that, there'll be Category I symposia and medical motion pictures on a wide variety of specialties.

Also featured are a number of special interest programs: a two-day session on the Medical Aspects of Sports, a series of special courses on clinical pathology, and a joint program by the American Veterinary Medical Association and the AMA on diseases transmitted to man by household pets. Physicians' wives and families will be offered interesting programs co-sponsored by the AMA's Council on Scientific Assembly and the Woman's Auxiliary of the AMA.

For more information, write:
Dept. of Circulation & Records, AMA,
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Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

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KEEP THE HYPERTENSIVE PATIENT ON THERAPY KEEP THERAPY SIMPLE WITH

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Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

Just 'Dyazide' once daily or twice daily
No inconvenient potassium supplements
Nor special K^+ rich diets needed as a rule

20
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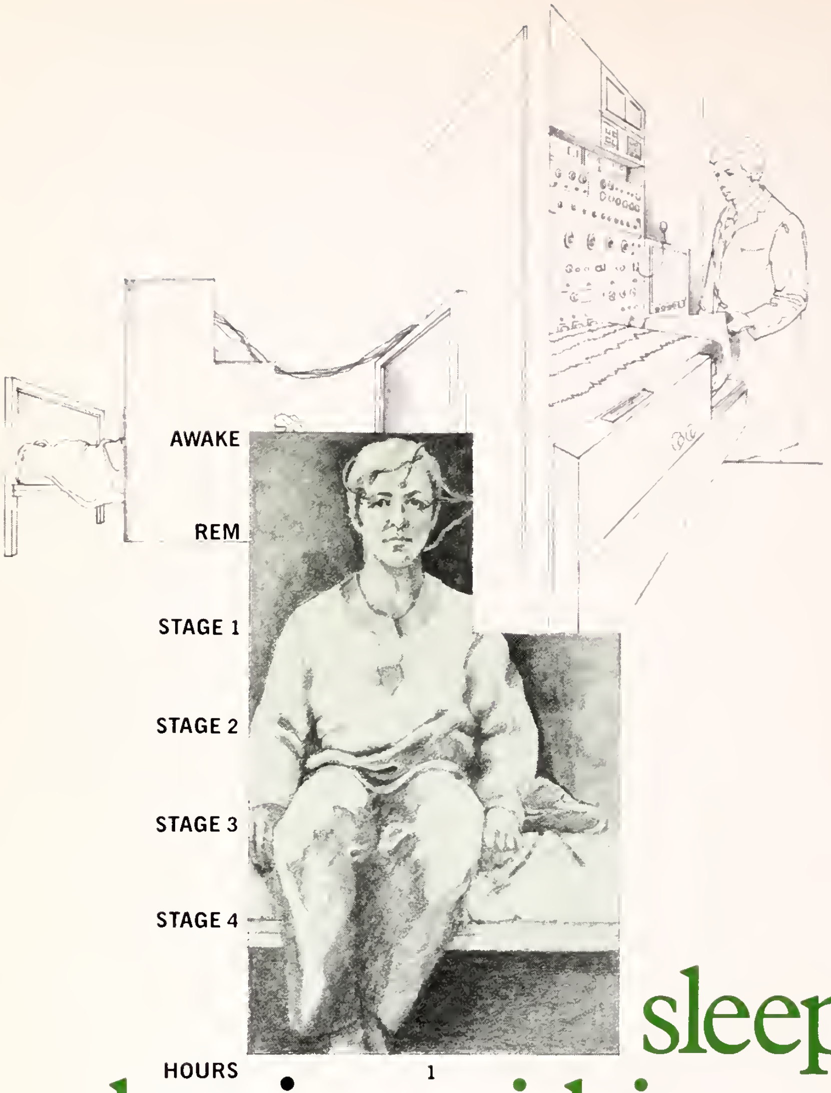
Two prime reasons patients drop out of hypertensive therapy are (1) the patient failed to understand directions, and (2) the regimen was overly complicated. Dosage is simple with 'Dyazide', easily understood, once or twice daily, depending on response. There's no need to complicate the regimen with potassium supplements or unwieldy potassium-rich diets.

TO KEEP BLOOD PRESSURE DOWN AND KEEP POTASSIUM LEVELS UP



sleep begins within 17 minutes, on average... an initial benefit of

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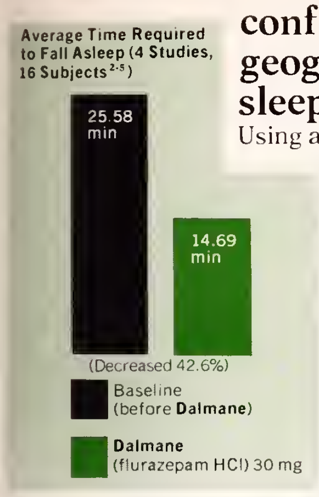
(flurazepam HCl)

proved by a 22-night clinical study of insomnia patients in the sleep research laboratory and at home[1]

Three insomnia patients selected for difficulty falling asleep were administered Dalmane (flurazepam HCl) 30 mg for 14 consecutive nights. Placebo was given for four nights prior to and four nights after Dalmane. Physiologic tracings on Dalmane nights 1-3 showed sleep induction time averaged 13.90 minutes; on Dalmane nights 12-14, 18.80 minutes. Combined average for the 6 monitored drug nights was 16.35 minutes.[1]



confirmed by clinical studies in four geographically separated sleep research laboratories[2-5]

Using a 14-night protocol involving eight insomniac and eight normal subjects, four studies confirmed the sleep-inducing effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule induced sleep within 17 minutes. In all these studies, Dalmane induced sleep rapidly, reduced nighttime awakenings, and provided 7 to 8 hours of sleep without repeating dosage[2-5]

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

Dalmane is generally well tolerated; morning "hang-over" has been relatively infrequent. While dizziness, drowsiness, lightheadedness and the like have been noted most often, particularly in the elderly and debilitated, physicians should be aware of the possibility of more serious reactions, as noted below.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

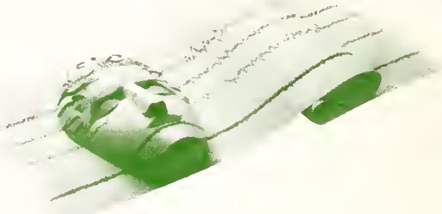
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.



when restful sleep is indicated

Dalmane®

(flurazepam HCl)

One 30-mg capsule *h.s.* — usual adult dosage (15 mg may suffice in some patients).
One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.

- induces sleep within 17 minutes, on average
- reduces nighttime awakenings
- sustains sleep 7 to 8 hours, on average, without repeating dosage

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REFERENCES: 1. Kales A, *et al*: *Arch Gen Psychiatry* 23:226-232, Sep 1970
2. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971
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4. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
5. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

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Lomotil puts him back in the game.

Physicians and patients both want prompt control of the symptoms of diarrhea. A rapid, uncontrolled loss of fluids and electrolytes can cause a medical crisis, particularly in children, and in patients who are seriously ill, or in people who are badly undernourished.

Lomotil usually stops diarrhea promptly. This rapid action halts the emergency aspect of diarrhea and is comforting and reassuring to the patient. Electrolyte and fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate antibiotic therapy should be given along with Lomotil.

Lomotil has few side effects, and those that do occur are generally mild.

Lomotil®
TABLETS/LIQUID

Each tablet and each 5 ml. of liquid contain:
diphenoxylate hydrochloride ...... 2.5 mg.
(Warning: May be habit forming)
atropine sulfate .... 0.025 mg.

Usually stops diarrhea promptly.

IMPORTANT INFORMATION: *This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.*

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.

Dosage and administration: ***Lomotil is contraindicated in children less than 2 years old.*** Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid*, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

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Commentary

A Practical look at FMGs

By Leslie Y. Ch'eng, MD, FAPA
Flint

The large influx of foreign medical graduates (FMGs) into the United States in the last 10 years is receiving much interest and attention lately. Articles have appeared in both national and state medical journals.

Being an FMG, I wish to present a few points which might be helpful in planning a solution. I graduated from an independent medical college in an Asian country. The college was built with American money, initially planned by leading medical educationists such as Doctors William H. Welch, Simon Flexner and Alan Gregg, and staffed by physicians trained at Johns Hopkins, Harvard, Yale, and medical schools in England, Holland, Switzerland and Austria. When a graduate completed a regularly scheduled residency training and a couple of years of post-residency experience, he was sent by the college to either America or Europe for an additional one to two years of training in that specialty. Thereafter, if the graduate remained in medical education, the college arranged for him a year of fellowship to study abroad every five to seven years, not unlike a sabbatical leave. This college is now closed.

A number of FMGs who come to the United States do so for political asylum or financial gain. Living in the United States is financially profitable, materially comfortable, and personally rewarding. This is particularly attractive to young FMGs who have not yet decided on a specialty, nor established a practice or a position in a medical community of their own country. Older graduates who have obtained status in their medical communities probably enjoy similar material comfort and hesitate to move to a new country where the practice of medicine poses a constant threat, particularly that of being involved in malpractice litigation. These young FMGs select training in specialties here not because they plan to meet the needs of their country of origin, but usually to fill available vacancies. I personally know FMGs who in their countries of origin have completed re-

Doctor Ch'eng

sidencies and reached assistant status in general surgery, urology, obstetrics and gynecology, ophthalmology, public health administration, maternal and child welfare, anatomy and physiology and later completed another (psychiatry) residency in their adopted country, the U.S.A. Some of them frankly have told me that psychiatry is the one residency training program which readily accepts FMGs, pays them well, and allows clinical practice without the demand of becoming board certified. The same individuals were also conscious of the fact that their cultural background interferes, at times, with the understanding and emotional empathy of problems presented by patients of a different culture.

What the medically developing countries need differs from what is needed here. Infectious and parasitic diseases are still very prevalent there. Many neurological diseases still are caused by syphilis. Public health and preventive medicine are much more important than gerontology and mental health. The requirements of the many medically developing countries are not provided for or even minimally considered in many of our existing training centers. As a result, many FMGs find good training here in oncology, organ transplantation, hemodialysis, neurosurgery and psychiatry without neurology, and upon return to their native lands find that they can only work in medical schools as teachers. There are no demands for such specialties in their community. These physicians are obliged to return to the U.S.A.

Problem Created By Shortage

In an attempt to solve this problem, we, the educators of American Medicine, must realize that the FMG "problem" is largely, if not primarily created by our so-called "medical manpower shortages." Many, if not all, of our state hospitals for the mentally ill and retarded patients, and a large number of our small, non-university affiliated city and county hospitals require housestaff, particularly interns. They are unable to fill these vacancies with our own medical school graduates. This fact is responsible in a large part for the importation of medical graduates from foreign countries and contributes materially to the "brain drain." The developing countries have concluded that many of the American trained FMGs do not really meet the needs nor fit in the local programs in their country, hence are no longer eager to bring them back.

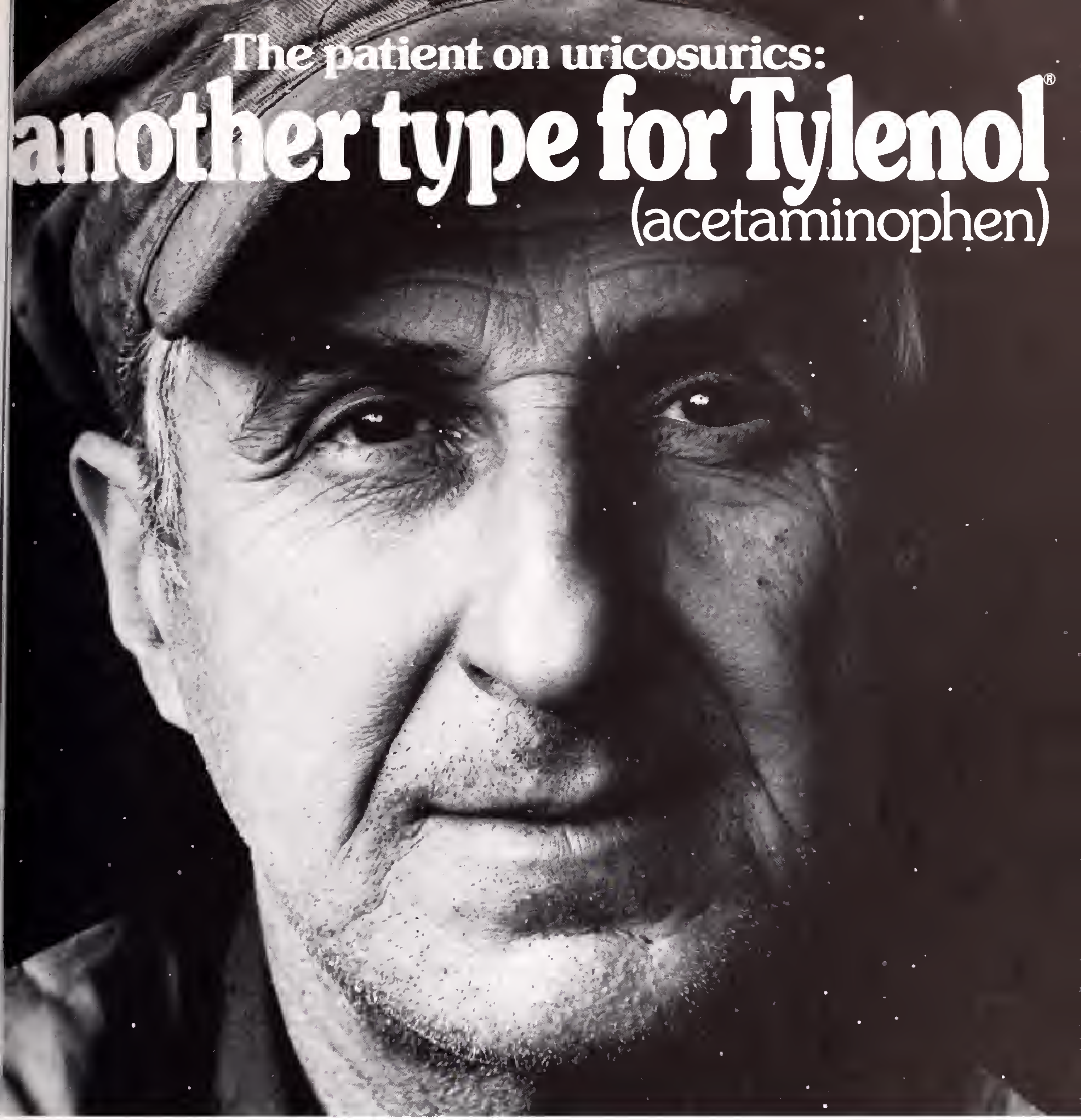
Our decision, as I see it, must be to determine not to import FMGs to fill these vacancies at the bottom of the ladder, but to put our own medical graduates in these positions. It may be necessary to have more medical schools and to admit more medical students. Every year thousands of American college graduates, rejected by our own medical schools, go abroad to study medicine. Upon their graduation, they are enticed to return to housestaff positions here. Some of them are required to spend another year or two in medical schools to qualify them in order to pursue their careers here. These aspiring physicians do bear a heavy financial responsibility for their medical training. Foreign countries do subsidize in varying amounts the training, thus reducing the governmental subsidy that would be required here at home. The problems occasioned by these facts must be faced squarely.

Our Ideal a Farce

The noble ideal of our assisting the medically developing countries to improve their medical care is a farce. Our missionary physicians who return to this country after serving a number of years providing realistic medical care to developing countries can do a much better job in training FMGs to meet their home needs. University trained specialists and sub-specialists may not have seen more cases of typhoid fever, dysentery, syphilis, and other infectious and parasitic diseases than many of the FMGs.

To meet the realistic needs of the medically developing countries, and to assist them in improving the medical care of their people, we should admit only medical graduate students or fellows, who have completed their specialty training in their countries and preferably have had a couple years of practical experience in the specialty. Such fellows are not to be employed as housestaff, but as trainees in their chosen specialties. Only then can we truthfully say that we are helping the medically developing countries and training the FMG for the country of origin. Otherwise we will be forever accused and probably continually will feel guilty of exploiting the services of the FMGs. To admit the FMGs only as trainees in their chosen and established specialties will discourage the rush of young FMGs into this country.

(Doctor Ch'eng is departmental chairman of undergraduate psychiatric education, Flint Medical Education Center, Inc., MSU College of Human Medicine.)



When the patient on uricosuric therapy requires an analgesic, a new problem arises. Aspirin in the usual analgesic doses inhibits the action of uricosurics.[1,2]

TYLENOL (acetaminophen), on the other hand, causes no appreciable uricosuric antagonism[2] and for this reason is preferred over aspirin in the gout patient.

This is only one of several 'types for TYLENOL'—that is, patients who should avoid aspirin. Considering all of them, wouldn't it provide added safety (as well as added convenience) to recommend TYLENOL (acetaminophen) routinely for simple analgesia?

References: 1. Martin, E.W., et al., ed.: Hazards of Medication, Philadelphia, J.B. Lippincott Co., 1971, p. 511. **2.** Seegmiller, J.E.: Med. Clin. North Amer. 45:1259-1272 (Sept.) 1961.

Precautions and Adverse Reactions: If a rare sensitivity reaction occurs, the drug should be stopped. TYLENOL (acetaminophen) has rarely been found to produce any side effects.

Supplied: Tablets, 325 mg.
For Children:
Elixir, 120 mg./5cc. (alcohol 7%).
Drops, 60 mg./0.6cc. (alcohol 7%).
Chewable Tablets, 120 mg.

Safer than aspirin,
yet just as effective for relief
of pain and fever

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New Mental Code Has Deficiencies

By Melvin J. Reinhart, MD
Ann Arbor

On November 6, 1974, several chapters of the new Michigan Mental Health Code were implemented in accordance with legislation passed earlier this year. It is important that psychiatrists, but really all physicians in the state, become aware of this new legislation which has been adopted on the basis of protecting individuals' civil liberties to an increased degree. The change in the previous code was mandated by federal court decisions earlier, and the current legislation seemingly was contrived to follow the guidelines established judicially. From my perusal of the act, I find little that substantively improves the treatment circumstance for those labeled "severely mentally ill."

In an arena where shortage of treaters is universally recognized, shortages are made more profound by demanding long hours of physicians' time to testify at the legion of hearings beginning with the first petition. The plethora of legal procedures infringe markedly on the limited resources available to treat the patients already hospitalized in mental health facilities, place enormous burdens on already crowded Probate Court agendas, and create the need for a "mental health" legal bar which is absent currently in the legal profession. The concept of the "lawyer-counselor" suggests that he, with no formal training, would have more insight into and consideration for the needs of the emotionally disturbed than the mental health professionals trained and experienced for many years.

The result of this legislation will in all likelihood be a profound reduction in the number of involuntary admissions to state hospitals.

However, the principal result of the reduction in the state hospital population will not be a lessening of mental illness by legislative edict, but rather a requirement that the general public live more harmoniously with significant and severe mental illness within its midst. There has not been a demonstrated willingness to do this on the part of the American public, as evidenced by the considerable resistance to the establishment of half-way houses and other residential after-care treatment centers within communities. This has resulted in these facilities being established over great resistance and located many times in the very least desirable sections of large metropolitan areas—to the significant disadvantage of the residents.

Admissions Limited

The thrust of the new legislation limits the "person requiring treatment" to one who is judged "within the near future to intentionally or unintentionally seriously physically injure himself or another person, and who has engaged in an act or acts or made significant threats that are substantially supportive of the expectation."[1] Also, a person who is "unable to attend to those of his basic physical needs such as food, clothing or shelter"[1] is considered to be a person who requires treatment.

Thus, in one bold sweep of the legislative hand, people suffering from profound degrees of mental illness are deprived of their right to treatment simply because their conscious mind prevents them from voluntarily signing into a hospital and subsequently remaining for a sufficient period of time to permit restitution.

Further, many of those patients who are able to be detained by the emergency provisions of the act cannot be treated until official court sanction is obtained. Thus, these individuals are unable to be given relief from their emotional tumult which is enormously disruptive to themselves and to other patients in the hospital. With relative ease, previously, psychopharmacologic agents would be administered to give relief to the involved patient and also to provide some modicum of peace for other patients hospitalized in the same milieu.

To be very direct, examples are beginning to be accumulated of the ludicrous position in which society and medicine find themselves in dealing with disturbed persons. For example, the manic patient who undertakes to dissipate the family's resources in one of his spending binges will, of course, not be defined as a person requiring treatment under the above noted criteria. The resultant trauma must be endured, I imagine indefinitely, by the next of kin. A patient undressing him or herself in public, running about the streets, and creating a major commotion would also not fall into the criteria noted above. Society would have recourse to have these disturbed individuals apprehended by the police on disturbance charges and incarcerated in the local jail. One wonders

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Doctor Reinhart is associate professor of psychiatry at the U-M Medical Center.

Doctor Reinhart

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[1] Quote from New Mental Health Code.

whether this is a progressive move or a throw back to the pre-Pinel times of the eighteenth century.

Of course the penal system which is already saddled with "treating" great numbers of emotionally disturbed individuals labeled prisoners (some estimate one-third to one-half of the prison population is psychotic) will now have to endure the burden of being inundated with treatable, emotionally disturbed people who could be handled much more expeditiously within the current health care system despite its many deficits and drawbacks.

Impact on Family

In addition to society at large, one needs to consider the very detrimental impact of the maintenance of these degrees of emotional illness within the family structure. The development of young children will certainly be adversely affected by the presence of very disturbed, untreated individuals in the role of parents within their homes. The general peace of mind of the family will be profoundly disturbed and, of course, the anger and frustration will be overtly and covertly directed toward the ill person who can not afford this additional stress.

The legislative act further provides for an adversary position potentially in all commitments for involuntary hospitalization. Thus one can realistically envision the scene of psychiatrists, prosecuting attorneys, and family members essentially in an adversary role against the emotionally disturbed individual with his counselor-lawyer at his side. Whatever the result of the "trial," can one expect familial bliss to follow such a scene?

More and more of these tragic occurrences, i.e. families bringing disturbed members to emergency rooms and being told treatment is unavailable and commitment unlikely, are occurring each day in the several weeks that the act has been operative. While in some sense it is abhorrent to consider "using" these pained families, it is important that they be made aware of the limitation of the legislation and the need to correct these errors and injustices. These troubled citizens should be referred to their local state legislators for redress.

I am sure that shortly, with the concurrence of most probate judges, prosecuting attorneys, and police agencies, the medical profession will have potent allies in correcting the deficiencies of this act.

Catastrophic Results

In the interim, it is important to attempt to document the possible, catastrophic results of this legislation, ill-conceived by people who were, I am sure, well intentioned in their desire but psychologically quite naive. It is entirely likely that tragedies such as suicide and homicide will increase significantly in this period.

In considering the fantasies people might have had in actively supporting this legislation, it would appear that the aura of mental health workers or police waylaying eccentric people on the streets and sending them to state hospitals for the rest of their lives was entertained. Nothing could be further from the truth.

State hospital populations which reached their zenith in 1955-56 have been steadily reduced by about two-thirds to three-quarters as the result of utilization of psychochemotherapeutic agents and the concept of community mental health units dispersed about the state and nation. If anything, from doing follow-up studies of patients sent to state hospitals through the years, I am convinced that a premature discharge was far more likely than a tardy one!

If the time, money and effort which will be required to implement this new procedural legislation were expended rather to improve the current mental health facilities and delivery, the emotionally disturbed would indeed be the recipients of enhanced assistance. Instead this code presents us with a classic example of "throwing the baby out with the bath water," i.e., the old legislation with its deficiencies and advantages, by giving legislative sanction to the troubled to continue to suffer from their illnesses with their legal "rights" very fully but disasterously protected.

GONOCOCCAL URETHRITIS/*Continued*

cation of both patients and health care workers is important, but improved screening tests and changes in behavior are necessary before gonorrhea will no longer be considered a national health problem.

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MSMS Action

MSMS May Begin Accrediting Courses This Spring

If the AMA Council on Medical Education approves of their plans, members of the MSMS Commission on Continuing Medical Education hope to complete their first review and accreditation of a postgraduate program before the spring, 1975 MSMS House of delegates meeting.

The commission, chaired by Louis E. Heideman, MD, Detroit, sent to the AMA on Dec. 12 its complete proposal for accrediting institutions and organizations with CME programs in Michigan. Approval is anticipated by March, according to Doctor Heideman.

The MSMS plan was drafted by the commission in over a year of meetings. Twenty-eight state medical societies now accredit continuing education programs for their members, and Michigan is among five state societies making plans to.

MSMS will focus on local hospitals with CME activities limited to local staff and physicians, state, local or county medical organizations, local voluntary health organizations without national CME programs and other organizations and institutions sponsoring essentially local CME programs for physicians.

"Our emphasis initially will be on accrediting institutions," says Doctor Heideman. He explains that individual programs will be looked at subsequently. There are an estimated 231 hospitals and 30 organizations which eventually may be reviewed.

The immediate tasks, Doctor Heideman continues, are to develop criteria for evaluating programs and organizing inspection teams. Plans are for the teams to include hospital directors of medical education, medical school experts, specialty society experts and voluntary health organization individuals with knowledge and expertise.

"Our accreditation program will give MSMS the opportunity to provide some direction to institutions so their programs are broader-based and meet a variety of educational needs," says Doctor Heideman.

Steering Committees Organizing New MSMS Divisions

Work is underway by leaders of the five new MSMS Divisions to streamline and coordinate the activities of the many MSMS committees. The division approved by the MSMS House of Delegates at its spring, 1974 session, will consolidate the work of the many MSMS committees into general areas of action, and assign specific projects to task forces. Steering committees of the new divisions are meeting now to organize.

Division 5, for the Study of Health Problems and Continuing Education, is "to stimulate advancement of the science and art of medicine and continually to seek to advance the medical, scientific, social, environmental knowledge of its members in order that the doctor may better serve his patients and the public health generally, to promote quality medical and health care . . . to foster and support continuing medical education, and to develop a continuing medical education certification plan for Michigan."

On the Steering Committee for Division 5 are Doctors Bolton, Donald T. Anderson, Richard C. Bates, Robert T. Blackhurst, Larry Blair, Robert D. Carbeck, Dean P. Carron, Robert H. Evans, John R. Franck, Jr., Roy J. Gerard, David Greenbaum, Louis E. Heideman, John W. Henderson, D. Bonta Hiscoe, Jean M. Holdredge, S. Newton Kelso, Jr., Edward J. Klopp, Donald H. Kuiper, Gerald H. Mandell, Charles H. Oppy, Richard W. Pomeroy, Herbert A. Raskin, Joseph A. Rinaldo, Jr., Ronald J. Sables, Hugo R. Saenz, Donato F. Sarapo, Lewis E. Simoni, Lee B. Stevenson, Charles C. Vincent and Gordon W. Willoughby.

Each steering committee is to meet at least twice, to plan its action and to monitor progress.

Division 1, on Legislation and Socio-Economics, is "to stimulate advancement of the economic and medical political knowledge of its members . . . to advocate fair remuneration for services rendered, to seek solution to Medicaid problems, to develop and support MSMS policies re current legislation, to introduce legislative measures to alleviate professional liability insurance problems, to conduct and evaluate an MSMS-sponsored practice management seminar, to explore and determine the proper MSMS role in matters of state and federal funding of medical and health services, and to initiate a more effective informal liaison with Michigan Medical Service."

Members of the Division 1 steering committee are Doctors Rice, Thomas A. Barton, Thomas R.

(Continued on page 38)

Must vasodilators and therapy for other diseases come into conflict?

not if the vasodilator is

VASODILAN®

(ISOXSUPRINE HCl)

the compatible vasodilator... no treatment conflicts reported

The cerebral or peripheral vascular disease patient often has coexisting disease[1] which calls for another drug along with his vasodilator. It may be a hypoglycemic, miotic, antihypertensive, diuretic, anticoagulant, corticosteroid, or coronary vasodilator.

Vasodilan is not incompatible with any of these drugs—no treatment conflict has been reported. And, unlike other vasodilators, Vasodilan has not been reported to affect carbohydrate metabolism, liver function, or intraocular pressure—or to complicate treatment of diabetes, hypertension, peptic ulcer, glaucoma, or liver disease.

In fact, there are no known contraindications to the use of Vasodilan in recommended oral doses, other than that it should not be given in the presence of frank arterial bleeding or immediately postpartum.

[1] Gertler, M. M., et al.: Geriatrics *25*:134-148 (May) 1970.

Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows.

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Adverse Reactions: On rare occasions, oral administration of the drug has been associated in time with the occurrence of severe rash. When rash appears, the drug should be discontinued. Occasional overdosage effects such as transient palpitation or dizziness are usually controlled by reducing the dose.

Supplied: Tablets, 10 mg.—bottles of 100, 1000, 5000 and Unit Dose; 20 mg.—bottles of 100, 500 and Unit Dose.

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MeadJohnson LABORATORIES

At a meeting of the MSMS Steering Committee for the Division on Health Problems and Continuing Education were, from left, Norman Bolton, MD, Detroit, steering committee and division chairman; S. Newton Kelso, Jr., MD, Monroe, and Gordon W. Willoughby, MD, Frankfort.

Elsewhere in MSMS headquarters, the Steering Committee for the Division on Legislation and Socio-Economics was meeting, led by Division and Steering Committee Chairman Robert E. Rice, MD, Greenville, seated center, and including from left, Thomas Barton, MD, Howell; Dwight Dutcher, MD, Detroit, and Robert Toteff, MD, Saginaw.

Berglund, John B. Bryan, Joseph E. Cooper, Mary L. Cretens, William A. DeYoung, Dwight J. Dutcher, John W. Grigg, Dale L. Kessler, Arthur J. Johnson, Marion G. McCall, Jr., Earl G. Moehn, Harold Perry, Charles L. Seffert, Robert J. Toteff, Arthur A. Ulmer, Aaron K. Warren, W. Donald Weston, Jr., Charles H. Willison, and Louis R. Zako.

MSMS Committee At Work With Third Party Carriers

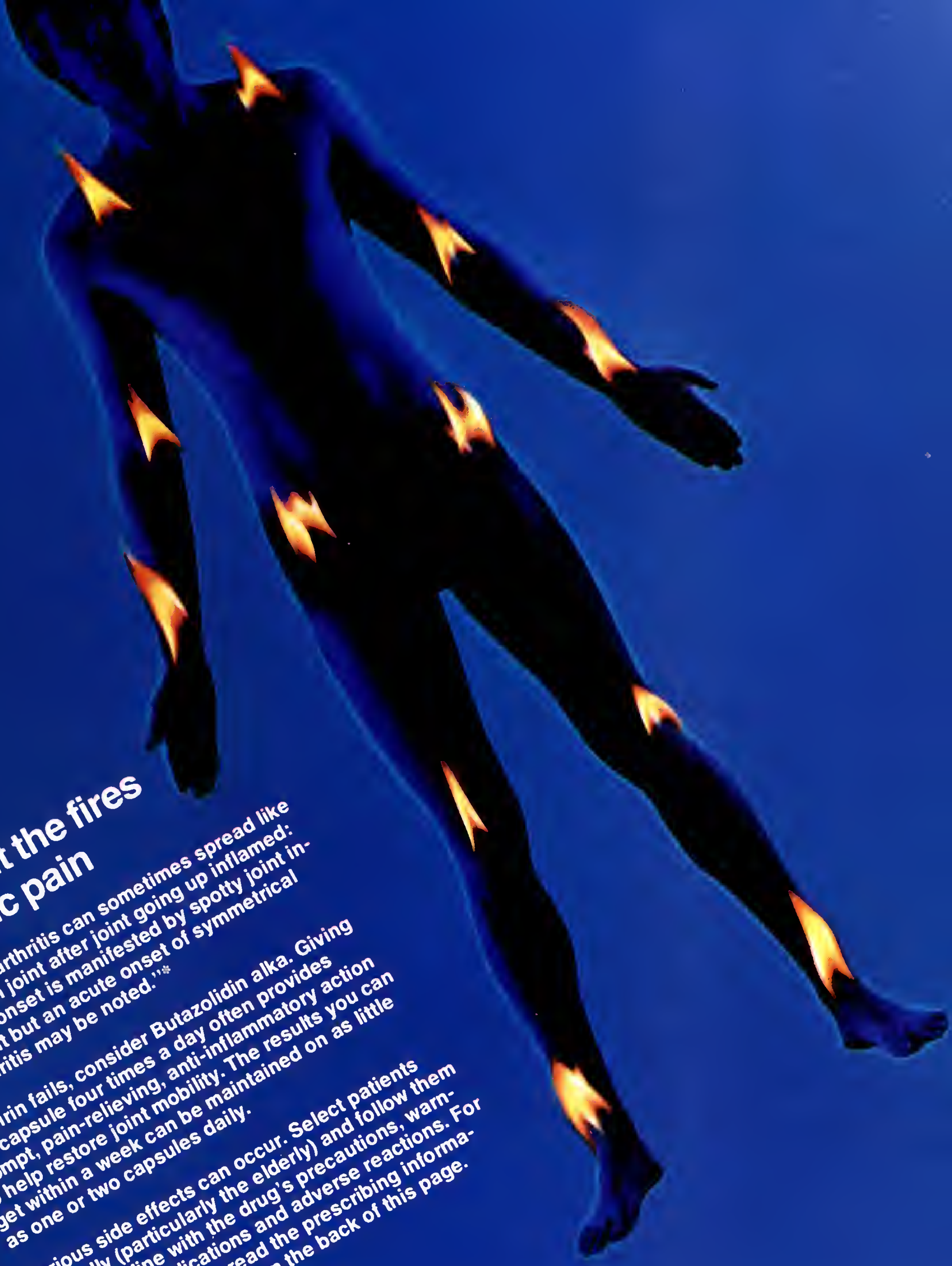
The MSMS Negotiating Committee with Third Party Carriers is making good progress toward the goals set for it by the spring, 1974 MSMS House of Delegates.

The committee was established by the House to work with all third party payors to establish a uniform coding system and uniform health insurance claim form, to abolish regional reimbursement practices and to improve the present Blue Shield profiling system.

On Dec. 11, the MSMS Council approved the committee's recommendation that all physicians use the AMA Current Procedural Terminology, third edition, as their single coding system for services. The committee now plans to ask all Michigan physicians to adopt the CPT by July, 1975.

At the committee's request, the two major medical insurance carriers, Medicaid and Michigan Blue Shield, currently are working to develop a uniform claim form that can be used by all physicians and still be handled by state and Blue Shield computer setups.

In addition, the committee is awaiting Michigan Blue Shield position papers on physicians' payment profiles and regionalization of reimbursement.



Putting out the fires of arthritic pain

Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed: "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."*

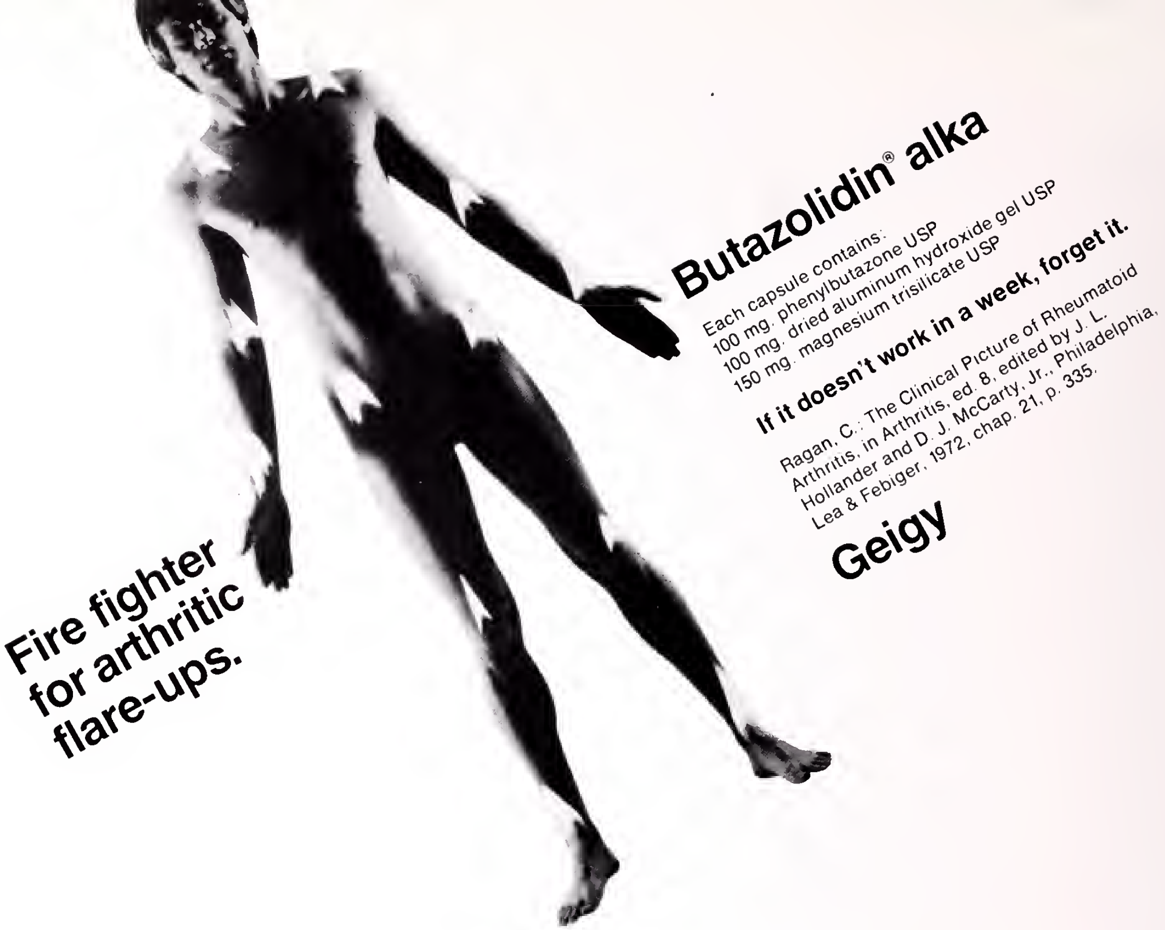
If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.

Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.


Butazolidin® alka
Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP
If it doesn't work in a week, forget it.
Ragan, C.: The Clinical Picture of Rheumatoid Arthritis, in Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335.
Geigy
Fire fighter for arthritic flare-ups.

Important Note This drug is not a simple analgesic. Do not administer casually Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy Dosage should be taken with meals or a full glass of milk Substitute alka capsules for tablets if dyspeptic symptoms occur Patients should discontinue the drug and report immediately any sign of fever, sore throat, oral lesions (symptoms of blood dyscrasia), dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema A one-week trial period is adequate. Discontinue in the absence of a favorable response Restrict treatment periods to one week in patients over sixty
Indications Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis
Contraindications Children 14 years or less, senile patients, history or symptoms of G I inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias, renal, hepatic or cardiac dysfunction, hypertension, thyroid disease, systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy
Warnings: Age, weight, dosage, duration of therapy existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions The disease condition itself is unaltered by the drug Use with caution in first trimester of pregnancy and in nursing mothers Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation Unexplained bleeding involving CNS, adrenals, and G I tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents Carefully observe patients taking these agents Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage If edema occurs in patients over sixty, discontinue drug
Precautions. The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions, complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc Cases of leukemia have been reported in patients with a history of short- and long-term therapy The majority of these patients were over forty Remember that arthritic-type pains can be the presenting symptom of leukemia.
Adverse Reactions: This is a potent drug, its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy, CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia, ulcerative stomatitis, salivary gland enlargement
(B)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
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Ardsley, New York 10502

BU 10259

MATERNAL HEALTH DESK REFERENCE CARD NO. 17

(Sponsored and Prepared by the Committee on Maternal and Perinatal Health
Michigan State Medical Society)

IMMUNIZATION DURING PREGNANCY

General Precautions

I. Use of immunization agents during pregnancy should be individualized, taking into consideration the risk involved to the patient.

II. In general, live virus vaccines should not be given except when susceptibility and exposure are highly probable and the disease to be prevented poses a greater threat to the woman or fetus than the immunization. If the patient is not pregnant, reliable contraceptive measures must be taken to insure no pregnancy for 2-3 months after immunization.

III. The following factors must be evaluated for each pregnant patient before immunization:

1. *Susceptibility* – Determined by history or serologic testing whether immunization is needed. A non-pregnant woman does not require Rubella vaccine if the hemoglutination inhibition titer is 1:10 or above in a reliable laboratory.
2. *Exposure Risk* – Reducing or eliminating exposure risk by avoiding travel is often preferable to vaccination or immunization.
3. *Risk from Disease* – Assess the potential morbidity or mortality of the disease concerned in the pregnant patient. Tetanus toxoid is indicated in all with no immunity. Smallpox and polio immunization become mandatory when the risk of exposure is great.
4. *Risk from Vaccination* – Assess the agent as to its effectiveness in conferring immunity vs its potential for complicating the pregnancy. With the exception of Rubella, little information is available on the potential deleterious effects of most vaccines on the fetus. In general, dead or inactivated vaccines may be less hazardous although their actual effects are unknown, and occasionally febrile response in the mother may jeopardize the pregnancy.
5. *BEWARE OF THE UNSUSPECTED PREGNANCY.*

Disease Type of Vaccine	Indications For Vaccinations During Pregnancy	Immunizations	Risk From Disease To Fetus or Neonate	Risk From Disease To Pregnant Female
Tetanus-Diphtheria Adult "dt" type toxoid preferred for routine immunizations	Updating tetanus immune status may be part of routine prenatal care, particularly if no primary series or no booster in 10 years.	*Primary* – 2 doses at 1-2 month intervals, booster 6-12 mo. later *Booster* – Every 10 years or physician's judgment if type of injury indicates need for booster. *Passive Immunization* – Human Globulin-if no previous protection and injury warrants use.	Neonatal tetanus mortality 60%	Severe morbidity unaltered by pregnancy. Tetanus mortality 60% Diphtheria mortality 60%
Poliomyelitis Live attenuated virus (SABIN) vaccine	Not routine for adults in U.S. May be given for exposure, epidemics or travel in endemic areas.	*Primary* – 3 doses of "OPV" vaccine at 1-2 month intervals. *Booster* – Not routine in adults. Small additional dose may be given if increased risk or exposure.	Anoxic fetal damage reported. Neonatal disease mortality 50%	Possible increased risk of more severe disease
Rubella Live attenuated virus vaccine	*Contraindicated (Teratogenicity of vaccine virus suspected – not confirmed) (See Rubella Card #18)*		Congenital defects particularly in first trimester. High rate of abortion.	Low morbidity and mortality unaltered.
Measles Live attenuated virus vaccine	*Contraindicated*		Increased abortion rate reported.	Significant morbidity but low mortality not altered by pregnancy.

DESK REFERENCE CARD/*Continued*

Smallpox Live vaccinia vaccine.	*AVOID—except in probable exposure. Fetal Vaccinia reported: Revaccination without VIG, if evidence primary scar. If primary vaccination needed give vaccinia immune globulin (VIG) simultaneously.*	*Primary* – Single dose multiple pressure method preferred. *Revaccination* – Same	Congenital smallpox reported. Possible increased abortion.	Mortality increase during pregnancy up to 90% reported. (Variola major)
Mumps Live attenuated virus vaccine.	*Contraindicated.*		Questionable association with fibroelastosis in neonate and other congenital problems.	Low morbidity and mortality unaltered by pregnancy.
Influenza Inactivated virus vaccines — Type A & B	At discretion of physician or if serious underlying disease or possibly in epidemic years	*Primary* – 2 doses 6-8 weeks apart in early fall *Booster* – single dose yearly in high risk individuals	Possible increased abortion rate.	Possible increase in morbidity and mortality during epidemic of new strain.
Rabies Killed virus vaccine (duck embryo) Rabies Antiserum Rabies Immune Globulin (Not Yet Licensed)	Each case considered individually. Pregnancy does not alter indications	Consult public health authorities	Determined by maternal disease	Essentially 100% mortality not altered by pregnancy.
Typhoid Killed bacterial vaccine	Not recommended routinely except for intimate or continued exposure or travel in endemic areas.	*Primary* – 2 injections 4 weeks apart. *Booster* – Every 3 years if indicated.	Unknown	Significant morbidity and mortality not altered by pregnancy.
Yellow Fever Live attenuated virus vaccine	*Contraindicated except for unavoidable exposure POSTPONE TRAVEL PREFERABLY*		Unknown	Significant morbidity and mortality not altered by pregnancy.
Plague Killed bacterial vaccine	Very selective immunization of individuals at risk.	Consult public health authorities	Unknown	Significant morbidity and mortality not altered by pregnancy.
Cholera Killed bacterial vaccine	ONLY FOR TRAVEL REQUIREMENTS Low efficiency. Effectiveness not over 50% and not effective after 3-6 months	*Primary* – 2 doses 1 week to 1 month apart. *Booster* – Every 6 months if danger persists	Unknown	Significant morbidity and mortality not altered by pregnancy.
Hepatitis – A (infectious) (no active immunization available) Immune Serum Globulin (May be used for passive immunization)	Exposure or travel needs. SEE CARD #19	NO VACCINATION Pooled Immune Serum Globulin may give short term protection	Transmission to fetus and neonatal hepatitis possible.	Significant morbidity and mortality not altered by pregnancy.
Varicella-Zoster		NO VACCINE Zoster Immune Globulin or Convalescent Zoster plasma can be used.	Possible increased rise of severe disease in neonate especially if premature.	Low morbidity and mortality not altered by pregnancy.

PREPARED FOR COMMITTEE ON MATERNAL AND PERINATAL HEALTH,
MICHIGAN STATE MEDICAL SOCIETY
Arthur A. Ulmer, MD, Chairman
Subcommittee on Medical Liaison

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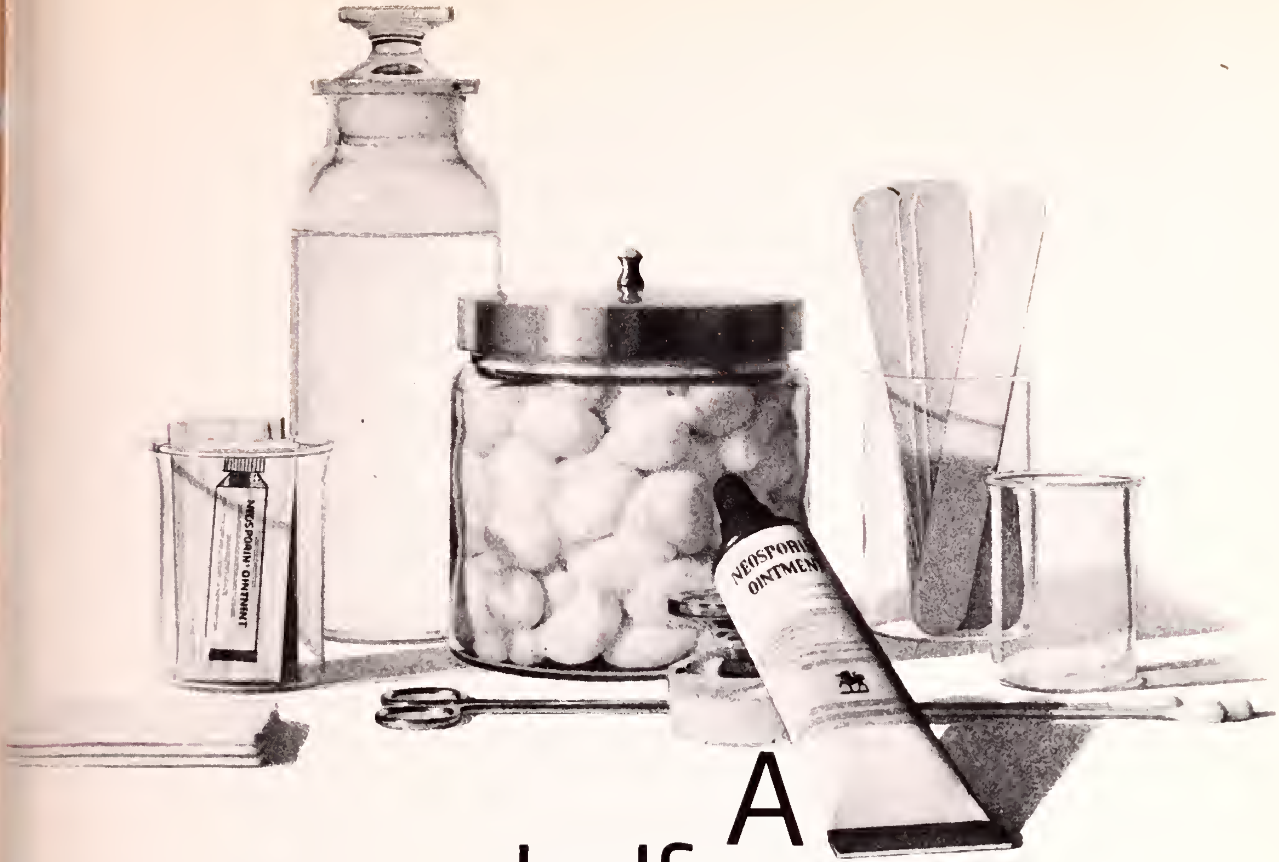
*NOTE: *These recommendations and outline based on ACOG Technical Bulletin #20 – March 1973 and HEW Center for Disease Control Bulletin Vol. 21 #25 June 24, 1972.*



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Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs. In tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: *Therapeutically,* used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Wellcome

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North Carolina 27709

Opinion & Dialogue

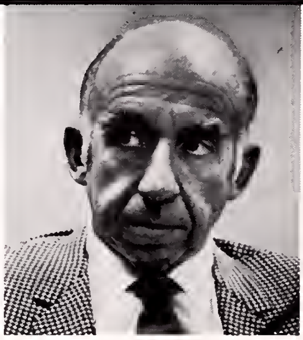
The Role of the Detail Man

Dr. Willard Gobbell
Family Physician
Encino, California

"I may be prejudiced, but I am very much in favor of the detail men I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.



Dr. Jeremiah Stamler
Chairman
Department of Community
Health and Preventive
Medicine, and Dingman
Professor of Cardiology
Northwestern University
Medical School

"In the total picture of dealing with health problems in this country there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center, research people, and academic people have and that's in all likelihoo on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent films produced by the pharmaceutical industry. When they function in this

Is He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

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capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.*, the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

P·M·A

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

Monthly Surveillance Report

Cases of Certain Diseases
Reported to the Michigan Department of Public Health
For the Four-Week Period Ending November 29, 1974

	1974 This 4-Week Period	1973 Same 4-Week Period	1974 Total To Above Date	1973 Total Same Date	Total Cases for 1973
Rubella	72	54	1,345	1,942	2,001
Cong. Rubella Syndrome	0	0	0	1	4
Measles	122	63	2,220	4,488	4,552
Whooping Cough	8	5	91	72	86
Diphtheria	0	0	0	0	0
Mumps	511	406	6,274	4,575	5,042
Scarlet Fever & Strep Sore Throat	1,764	2,691	29,731	21,124	24,467
Tetanus	1	0	4	1	2
Poliomyelitis (paralytic)	0	0	1	0	0
Hepatitis	259	304	3,396	3,571	3,872
Salmonellosis (other than S. typhi)	68	63	929	713	795
Typhoid Fever (S. typhi)	1	1	11	13	14
Shigellosis	119	54	1,323	569	623
Aseptic Meningitis	5	25	149	414	434
Encephalitis	11	9	66	157	163
Meningococcic Meningitis	4	4	48	48	54
H. Influenza Meningitis	9	6	111	83	89
Tuberculosis	103	89	1,336	1,379	1,380
Syphilis	183	384	2,499	4,019	4,328
Gonorrhea	2,715	2,305	29,735	28,434	31,128

Information can be supplied by the local health department on the local incidence of disease.

Maurice Reizen, M.D., Director
Michigan Department of Public Health

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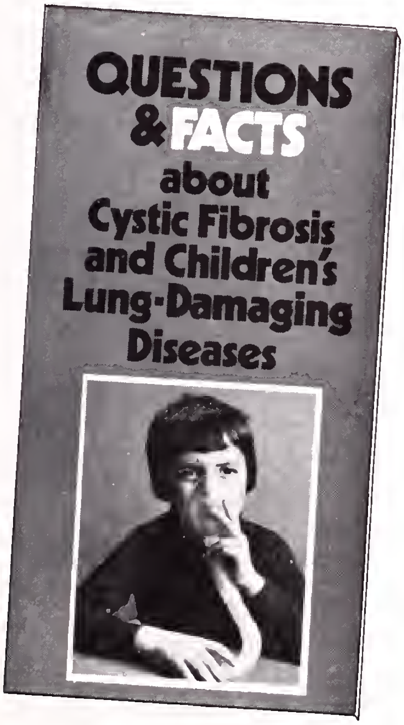

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Mental Health: The Challenge to Michigan

By William G. Milliken
Governor, The State of Michigan

Mental health services are a topic of deep concern to me. My concern, as a humanitarian, wells up from a belief that the greatest wealth is health and from Shakespeare's observation that "tis the mind that makes the body rich."

But my concern as Governor stems from three sources:

One is awareness that there will be a never-ending need for the stabilizing effects of high quality mental health services. I believe those services must be an integral part of general health care and that every citizen has a right to them.

The second comes from realization that planning and providing for mental health services during this period of surging changes in societal attitudes is a tremendous challenge fraught with complexities and the possibility that unwary trailblazers may encounter as many setbacks as triumphs.

The third springs from knowledge that some serious problems exist in our current mix of an old institutional system with a relatively tender, still-developing new system having as its goal mental health services available to all within their own community. These problems demand, and are receiving, our immediate attention.

I would like to tell you about some accomplishments that I think are of particular importance.

- The crucially needed, new Mental Health Code was passed by the Legislature and I was privileged to sign it into law in August.
- In the 83 counties in Michigan, 50 community mental health boards have been formed under Public Act 54. When these boards have fully implemented community mental health programs, 97 percent of the state's population will have mental health services available to them within their own communities or within easy traveling distance. Under the new code, state support will provide up to 90 percent of the cost of approved community services.

Governor Milliken

- I am particularly pleased with progress made in confronting problems associated with mental retardation. We have substantially modernized residential facilities for the retarded and are developing regional centers which provide important supportive services both to families and community organizations.
- Our ability to upgrade quality of care has been greatly strengthened by enactment of House Bill 5386. The Department of Mental Health now has full authority and the responsibility to license and monitor care in all private psychiatric facilities.
- The number of patients entering state hospitals for service has increased more than 50 percent during the past five years. On the other hand, 4,300 more patients were returned to the community last year than admitted (10,200 admitted and 14,500 returned to community life). A person entering a state hospital today can expect to be home within three months.
- On the basis of an in-depth study recently completed at my direction, significant improvements in our community placement program are now being made. The concept of community placement is important and timely in the 1970's. But, we must recognize that serious and practical problems surround its implementation.
- A uniform process for identifying patients who are ready for placement has been formulated.

Patients can be discharged from an institution, and beds emptied, by administrative decision. But, in the absence of adequate community resources this can be achieved only at the cost of hardship to the patients and their families.

The next step involves mobilization of resources for those placed in the community. This emphasizes the importance of establishing closer relationships between our institutions and community mental health boards.

Mental Health Services in Perspective

The basic problem of mental illness — an individual's temporary or chronic inability to cope with the demands of his environment — has not changed. What continually changes is society's concept of what is considered potentially dangerous to the individual himself or others.

In Michigan, we have always been among the leaders both in the development of new treatment methods and patient care.

In 1834 the name of the Wayne County "Pest House" was changed to "Poorhouse" and the presence of insane people was recognized by stating "the expense incurred in receiving any lunatic persons shall be audited and allowed by the Board of Supervisors and paid."

From such an inauspicious beginning progress was made. For example, before 1880 a farm colony for the insane, the first on the continent, had been established at Kalamazoo. One of the country's earliest training schools to prepare nurses to care for the mentally ill was at Pontiac.

In 1906 Michigan became the first state in the nation to provide special facilities for instruction of medical students in the field of insanity through establishment of the State Psychopathic Hospital at The University of Michigan.

Michigan was among the first eight states to establish a department of mental health or mental hygiene.

Mental Health Services in Transition

During the past three decades, Michigan has kept pace with rapid changes in public expectations and therapeutic developments in mental health care.

We have gone, for example, from the tragic period when our mental hospitals were so overcrowded that they were operating — "struggling" would be a better word — at 122 percent capacity, to our current status of having more beds than patients in some of our state institutions.

To a large extent this has been made possible by the introduction and use of new drugs.

I recognize that, with few exceptions, psychotropic drugs do not alter the basic pathology of major mental illnesses. But they can dramatically alter the natural history of these disorders and improve a patient's ability to cope with his surroundings. This is why many patients may be returned to the community after a short stay of intensive care. It is also why instead of adding new wings to our hospitals, we are seeing redistribution of the patients from institutional to community programs.

Despite our advances in treatment, the size of our mental health problem continues to grow.

Nationally, there are an estimated 20 million persons with mental problems ranging from temporary emotional instability to serious mental disorders or disability. One out of every 10 children born today is expected to have some measure of mental illness during his or her lifetime. In Michigan there currently are 13,000 people in state mental institutions and an estimated 20,000 persons in the community with some form of diagnosed mental illness.

As our population continues to grow; as more of our population lives to advanced years; as tensions of urban society mount, and as expectations for mental health care rise, further increase in these figures can be expected.

This is a period of great national ferment and change in mental health history. The transition from outmoded methods and philosophies to newer systems of greater promise and relevance to today's society may not be easy, but does present unusual opportunities.

As Margaret Mead, president of the American Association for the Advancement of Science, observed recently about the world's period of social transformation: "This is an ideal moment in history — a moment that we can possibly seize to build interdependent social institutions that we haven't had before."

The Task at Hand

Making the most of our resources for the betterment of mental health services in the state, as well as the nation — the finances, facilities, manpower, knowledge, insight, and determination — is a formidable undertaking requiring cooperation at all levels.

The federal government's role must be to establish broad national policies and support state programs in line with those policies.

The state's responsibility is to provide more definitive policy and to manage the mental health care system within the state. It must also continue to provide a major share of mental health services. In the future it must provide increasing amounts of technical assistance and needed financial support to regional and community networks. In addition, the state must establish and monitor quality standards for providers of mental health services.

Currently, the Department of Mental Health's budget is $263,348,000. Next year, inflationary forces alone are expected to drive current budgeted programs to higher cost levels.

For this reason, we must assume that there will be great competition for scarce funds. We must accelerate our efforts to measure the value of current mental health programs and eliminate those that are less effective. Our scarce resources must be dedicated to those service areas where we can make the most effective use of each available dollar.

Because the need for evaluating mental health programs is so important, I fully supported the provisions of the Mental Health Department's appropriation bill for Fiscal Year 1974-75 which authorized it to establish an analytical capability to determine the effectiveness of all current institutional and community programs.

It is, of course, at the community level that mental health services must be delivered. And it is here, too, where significant planning, analysis and evaluation must occur.

We must make it clear to all agencies that requests for state funds in support of programs must be accompanied by rigorous justification. Employing modern methods of analysis, agencies must explain and document what they do, why they do it, what effect it has, and what results will ensue from additional — or less — commitments of public resources.

Act 54 Boards are clearly in the center of the action, right on the firing line — with a great weight of responsibility of exceptional variety of opportunities. So are institutions, both for the mentally ill and the retarded. Whether community leadership will come from Act 54 Boards or from state institutions serving as regional mental health centers is still to be determined.

I am not persuaded that we can seriously consider phasing out our mental institutions. They have a role of major importance. Services they provide are essential to those persons who cannot be adequately cared for in their homes, general hospitals, or community facilities. Further, there is an inevitable time lag in building services in the community formerly provided in institutions.

What is changing is the form, function, and structure of our state institutions. I perceive they will have several characteristics — smaller in size, more highly structured and much more specialized in the care they provide.

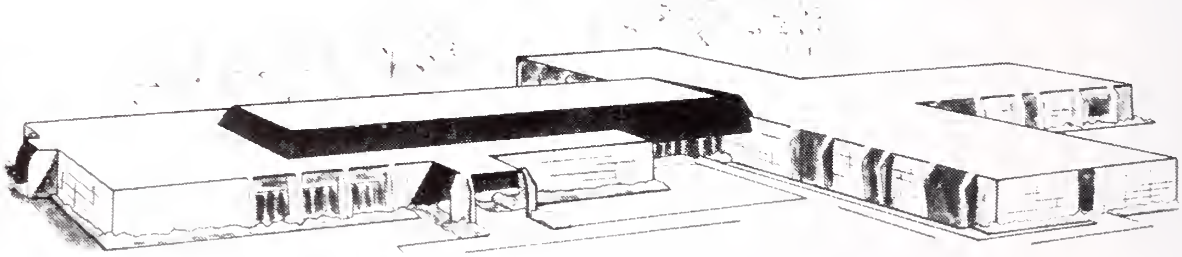
In their new roles, they will give more emphasis to short-term and ambulatory care and will provide back-up services on a regional basis for other components of our mental health care system — general hospitals and community programs.

In formulating new roles for institutions and Act 54 Boards, prime effort should be on links between existing and planned organizations, all focused on the client and his family's problems in living.

These relationships are important now. They will become especially important with the advent of national health insurance, which will remove some of the barriers and distinctions between public mental health services and those provided by private practitioners.

As a first step in developing a more effective framework for providing human services in the community, I proposed to the Legislature a year ago the merging of those services into a single agency at the state level.

FOREST VIEW PSYCHIATRIC HOSPITAL



Charles L. Callaway MD, Medical Director

Located on six beautifully wooded acres, *FOREST VIEW HOSPITAL* is Michigan's newest private psychiatric facility, specializing in short term intensive treatment. Comprehensive adjunctive therapy, including occupational and recreational therapy is emphasized. The prime goal of the hospital personnel is to aid the patient in coping with his illness and return him to community life as soon as possible. Licensed by the State of Michigan, Department of Mental Health, Accredited by the Joint Commission of Accredation of Hospitals, Participant in Medicare and Medicaid.

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A bill which would accomplish this unification passed the House of Representatives by a convincing margin on Dec. 6, 1973. The bill then passed over to the Senate, which has failed to act.

I believe that this concept must not be allowed to die. I am convinced that rational reorganization of existing services can permit Michigan to do an even better job in providing essential services to our citizens.

What really counts is the individual and his ability to get good care.

Well-rounded, comprehensiveness of care; accessibility without distance, legal or financial barriers; simplicity of referrals, and appropriateness and high quality of care are our primary objectives.

The new Mental Health Code, which in fact is a landmark in the history of mental health, provides a sound statutory foundation for achieving these objectives.

The code clarifies a patient's right to care. It does not provide that care. But, it gives the state an opportunity to move ahead with new systems and new programs to make certain that right is honored.

For the individual, community health programs not only mean hope and health close at hand, but an opportunity for service to the community when it is possible to be on the giving, instead of the receiving, end. Citizen participation is not only desirable, but essential. Consumers of service must be involved in the design and monitoring of human service programs in their communities.

Future Directions In Mental Health Services

I would like now to share with you a few thoughts I have about what the future can hold.

(a) To begin, I do not believe the total burden of mental illness and retardation will decrease in the next two decades. Rather, as I mentioned earlier, it is likely to increase. There undoubtedly will be shifts in patterns of illness but the problem will still be there.

Consequently, when we talk about moving people from institutions to the community, we must realize that we are not reducing the number of mentally ill in need of continuing care, just redistributing the burden.

(b) I believe we are moving toward a *unified* system of care. Today, our institutional and community systems of mental health care are to a large extent separate and too often unrelated. These systems, which have common purposes and goals, must now be brought together. Only then can effective community placement become a reality.

(c) As the transition from an older to a new system of mental health services becomes recognized, the need for physicians and other practitioners to provide care in both institutions and the community will become more apparent.

I am asking our professional schools to accept the challenge of devising more effective ways of recruiting and training bright young people for public service in the new field of mental health.

(d) Finally, and most importantly, I believe we will never make any significant inroads on the incidence of mental illness until we place much greater emphasis on the development of mental *health*.

Prevention of mental illness and building of mental health must begin before birth — in educational programs and medical services for prospective parents. Next must come aggressive intervention to identify and treat mental disorders in early childhood.

We should take a hard look at our school system to see what can be done in terms of teaching children some of the coping skills that enhance their own self image, their respect for differences in other people, and their ability to solve their own problems as they relate to their families and their friends.

For if people can learn to cope effectively within society, we may finally see a reversal in the total burden of mental illness.

Accomplishing needed change will be both complex and costly. It will not be possible without support from all levels and all organizations, especially private practitioners, the Michigan Society for Mental Health and the Michigan Association of Community Mental Health Boards.

A major ingredient required is professional leadership. Much of this leadership must come from the State Department of Mental Health.

During the past three months, I have taken steps to stabilize and strengthen this department. I have appointed the best people I know to assist me in providing imaginative direction. The department is undergoing needed changes in organizational structure and program operation. We are strengthening the central office so that it can provide technical assistance of the highest quality to agencies and institutions throughout the state.

In the last analysis, the success of our mental health programs depends on progressive, unyielding leadership on the part of elected officials.

With the help of thousands of dedicated people, I intend to continue my commitment to making our mental health care system in Michigan one of the best and one of the strongest in the entire nation.

That is our challenge.

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(Continued on Page 58)

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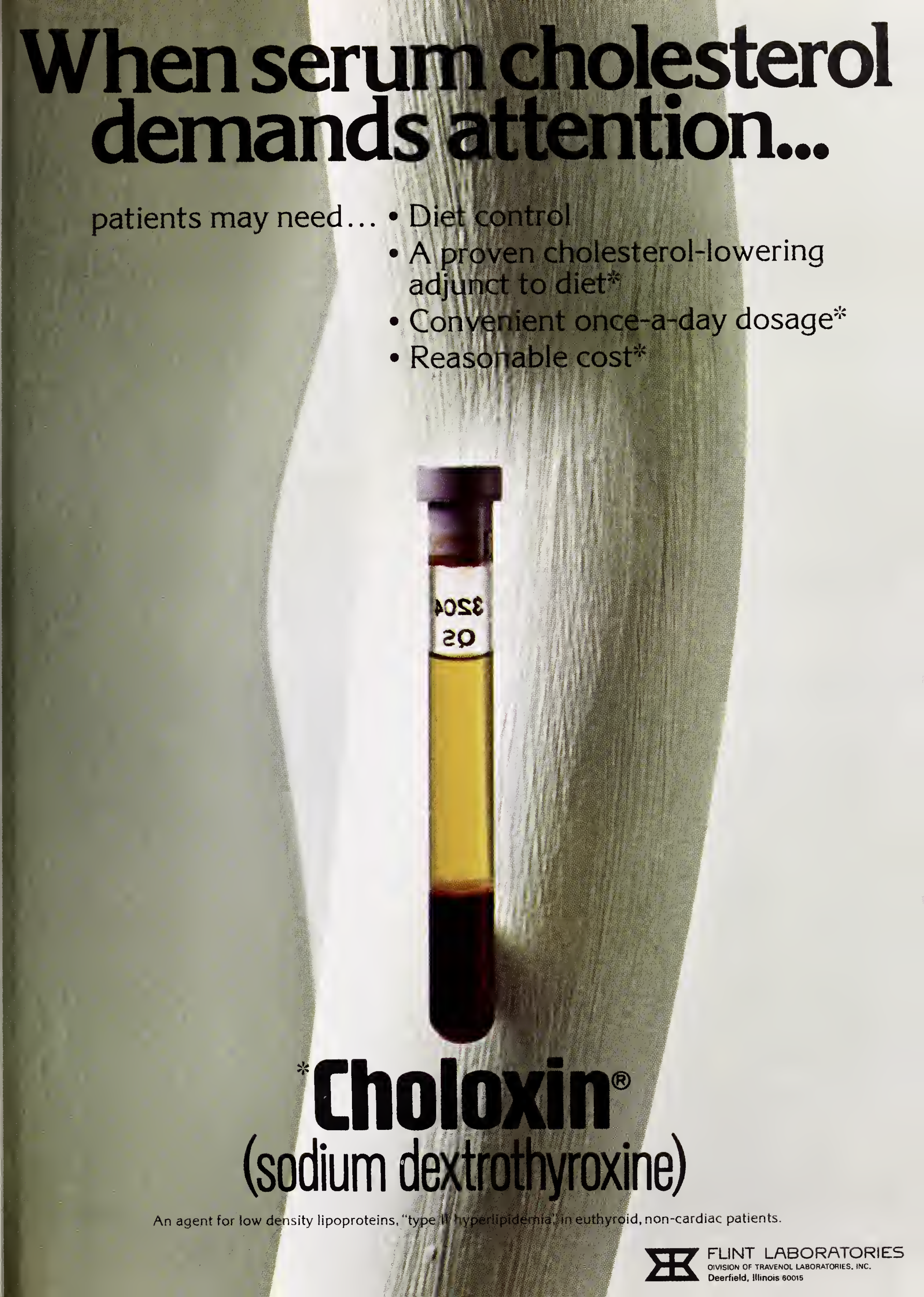

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An agent for low density lipoproteins, "type II hyperlipidemia," in euthyroid, non-cardiac patients.

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Four strengths . . . 1, 2, 4, and 6 mg. . . . are available making the scored tablet regimen a flexible dosage system. And, for most patients, CHOLOXIN tablets offer once-a-day dosage.

AN IMPORTANT NOTE:
It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

CHOLOXIN® (sodium dextrothyroxine) Single-Tablet-A-Day Dosage Schedules

See prescribing information in package insert reproduced below.

	Starting Dosage	Increased Monthly by	Usual Maintenance	Maximal Recommended
Adult Hypercholesterolemic	1.0-2.0 mg.	1.0-2.0 mg.	4.0-8.0 mg.	4.0-8.0 mg.
Pediatric Hypercholesterolemic	0.05 mg./kg. body weight	0.05 mg./kg.	0.1 mg./kg. body weight	4.0 mg.
Hypothyroid Cardiac	0.5-1.0 mg.	1.0 mg.	4.0 mg.	4.0 mg.

Choloxin®

(sodium dextrothyroxine)

Description

CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine. It is chemically described as D-3,5,3′,5′-tetraiodothyronine sodium salt.

Actions

The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

Most of the available evidence indicates that CHOLOXIN stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces. Cholesterol synthesis is not inhibited and abnormal metabolic endproducts do not accumulate in the blood.

Indications

This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease.

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication.

Before prescribing, note the following: Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively in patients with significant myocardial impairment. CHOLOXIN dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications

The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease, including angina pectoris; history of myocardial infarction; cardiac arrhythmia or tachycardia, either active or in patients with demonstrated propensity for arrhythmias; rheumatic heart disease; history of congestive heart failure; and decompensated or borderline compensated cardiac status.
2. Hypertensive states (other than mild, labile systolic hypertension).
3. Advanced liver or kidney disease.
4. Pregnancy.
5. Nursing mothers.
6. History of iodism.

Warnings

CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care. Special consideration of the dosage schedule of CHOLOXIN is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels. Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN. As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients, and in surgery in hypothyroid patients in whom it may be advisable to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who had required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age

Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug; it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions

It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly, they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHOLOXIN for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions

The side effects attributed to dextrothyroxine therapy are, for the most part, due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient, although its relationship to CHOLOXIN therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN; a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration

For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN is approximately 0.1 mg per kilogram. The initial daily dosage should be approximately 0.05 mg per kilogram to be increased in up to 0.05 mg per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

How Supplied

CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4, and 6 mg tablets.

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Welcome

Members of the Michigan State Medical Society join in welcoming the following new members into a progressive state medical organization. MSMS is dedicated to promoting the science and art of medicine, the protection of the public health, and the betterment of the medical profession. Each new member is encouraged to join with other MSMS members at both the local and state levels in achieving these goals.

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DESCRIPTION: Methyltestosterone is 17β-Hydroxy-17-Methylandrost-4-en-3-one. **ACTIONS:** Methyltestosterone is an oil soluble androgenic hormone. **INDICATIONS:** In the male: 1. Eunuchoidism and eunichism. 2. Male climacteric symptoms when these are secondary to androgen deficiency. 3. Impotence due to androgenic deficiency. 4. Postpuberal cryptorchidism with evidence of hypogonadism. Cholestatic hepatitis with jaundice and altered liver function tests, such as increased BSP retention and rises in SGOT levels, have been reported after Methyltestosterone. These changes appear to be related to dosage of the drug. Therefore, in the presence of any changes in liver function tests, drug should be discontinued. **PRECAUTIONS:** Prolonged dosage of androgen may result in sodium and fluid retention. This may present a problem, especially in patients with compromised cardiac reserve or renal disease. In treating males for symptoms of climacteric, avoid stimulation to the point of increasing the nervous, mental, and physical activities beyond the patient's cardiovascular capacity. **CONTRAINDICATIONS:** Contraindicated in persons with known or suspected carcinoma of the prostate and in carcinoma of the male breast. Contraindicated in the presence of severe liver damage. **WARNINGS:** If priapism or other signs of excessive sexual stimulation develop, discontinue therapy. In the male, prolonged administration or excessive dosage may cause inhibition of testicular function, with resultant oligospermia and decrease in ejaculatory volume. Use cautiously in young boys to avoid premature epiphyseal closure or precocious sexual development. Hypersensitivity and gynecomastia may occur rarely. PBI may be decreased in patients taking androgens. Hypercalcemia may occur, particularly during therapy for metastatic breast carcinoma. If this occurs, the drug should be discontinued. **ADVERSE REACTIONS:** Cholestatic jaundice • Oligospermia and decreased ejaculatory volume • Hypercalcemia particularly in patients with metastatic breast carcinoma. This usually indicates progression of bone metastases • Sodium and water retention • Priapism • Virilization in female patients • Hypersensitivity and gynecomastia. **DOSAGE AND ADMINISTRATION:** Dosage must be strictly individualized, as patients vary widely in requirements. Daily requirements are best administered in divided doses. The following is suggested as an average daily dosage guide. In the male: Eunuchoidism and eunuchism, 10 to 40 mg.; Male climacteric symptoms and impotence due to androgen deficiency, 10 to 40 mg.; Postpuberal cryptorchism, 30 mg. **HOW SUPPLIED:** 5, 10, 25 mg. in bottles of 60, 250.

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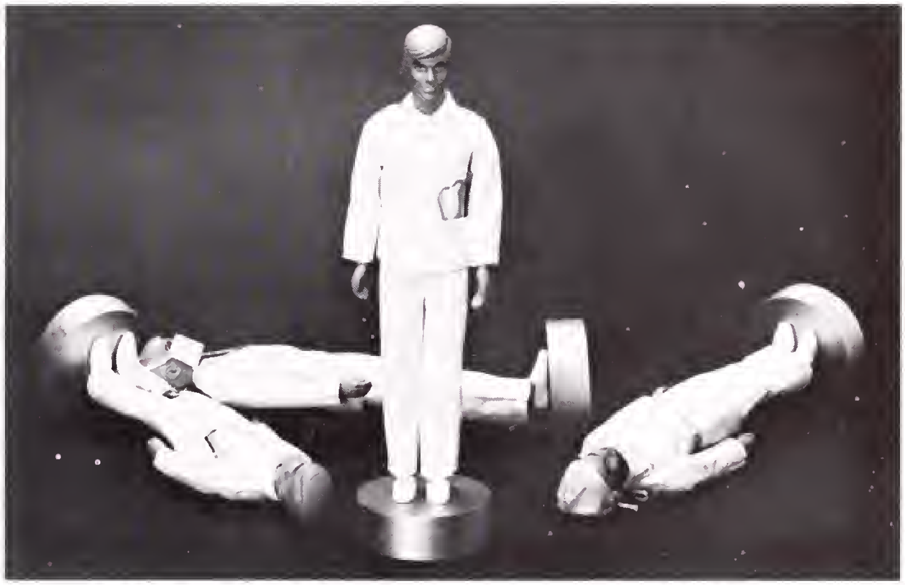
The malpractice menace: It strikes 3 out of 4 doctors.



That's right. Three out of four doctors get hit with a malpractice suit during their medical careers.

It can happen anytime. And to any doctor at any stage of his professional life.

That's why no doctor can afford to ignore the malpractice menace. Not only because the financial losses can be shattering. But also because the stigma attached to a malpractice action can be so damaging.

Now there's a survival kit

Medical Economics has a special survival kit to help you with this problem. It's our cassette series on "Malpractice: What you must know and do."

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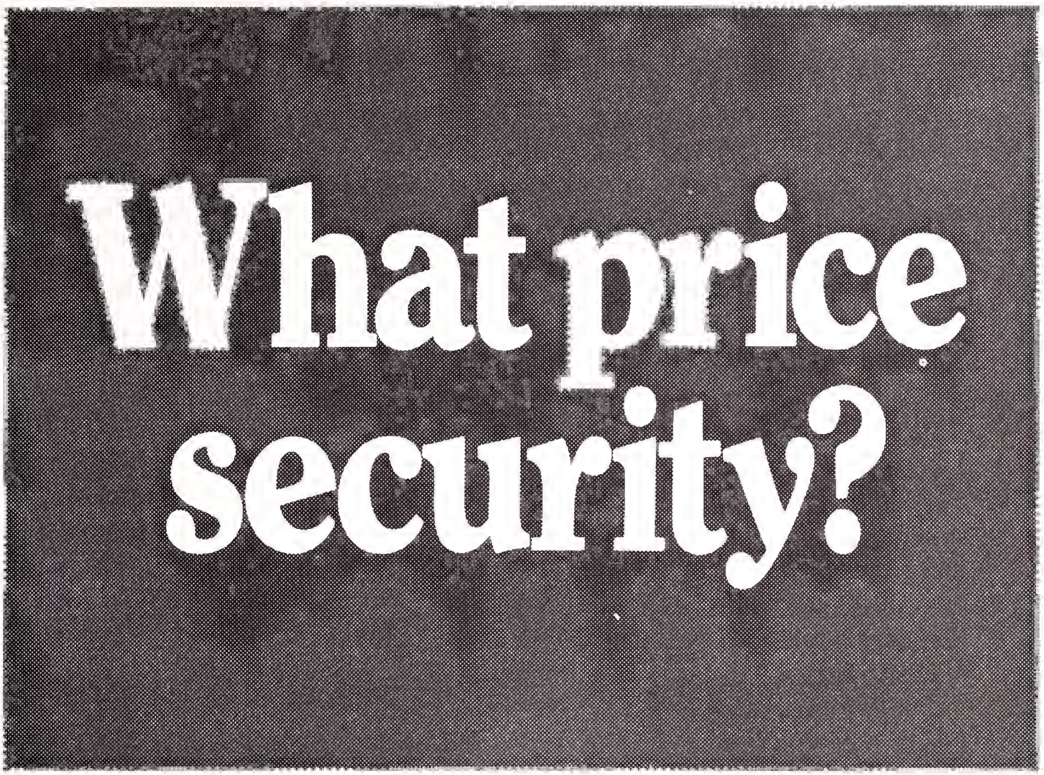

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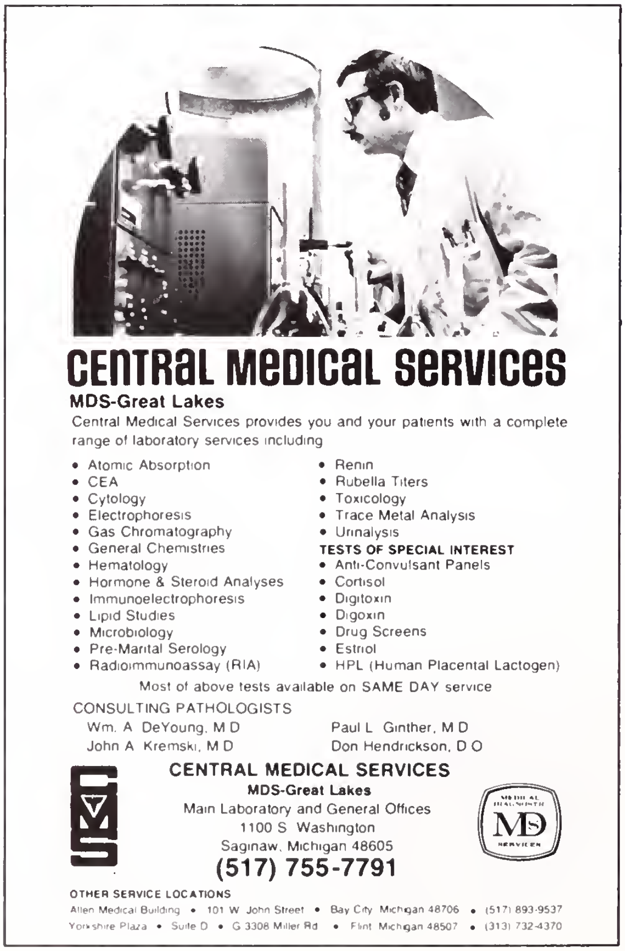
In Memoriam

Lowry C. M. Conley, MD
Highland Park

Retired Highland Park family physician, Lowry C. M. Conley, MD, died Nov. 28 at the age of 86. Doctor Conley was a life member of the Wayne County Medical Society and had practiced from 1913 to 1968. He was on the Grace Hospital staff 18 years and was a graduate of the University of Cincinnati medical school.

Everett W. Durham, MD
Dearborn Heights

Dearborn Heights internist for 25 years, Everett W. Durham, MD, died Nov. 16 at the age of 58. Doctor Durham was a graduate of the WSU School of Medicine and was director of medical education at Oakwood Hospital, Dearborn. He was on the medical faculties of Wayne State University and Michigan State University. Doctor Durham also belonged to the Michigan and American heart associations.



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Robert A. Fargher, MD
Pontiac

Robert Austin Fargher, MD, medical director of the GMC Truck and Coach Division since February died Nov. 9 at the age of 62. Doctor Fargher was graduated from Northwestern University Medical School and had been a generalist in Indiana during most of his career. He was past president of the LaPorte County and 135th District Medical Societies and past president of the Northern Tri-State Medical Association. He had been a member of the Indiana State Medical Association's Commission on Voluntary Health Agencies.

William J. Moerdyk, MD
Holland

William Jean Moerdyk, MD, Holland family physician for 21 years, died Nov. 10 at the age of 82. Doctor Moerdyk also had served 23 years as a medical missionary in Iraq for the Reformed Churches of America. He was a graduate of the University of Michigan Medical School and was Hope College health physician from 1951-1956.

Henry D. Stricker, MD
Detroit

Henry D. Stricker, MD, retired Detroit generalist, died Dec. 1 at the age of 77. Doctor Stricker was graduated from the University of Michigan Medical School and was affiliated with Grace, Lincoln and Booth Memorial hospitals. He had practiced in southwest Detroit since 1926 and was district surgeon for the Wabash Railroad for nearly 50 years.

A. J. Vorwald, MD
Green Bay

The former chairman of the WSU Department of Occupational Medicine, Arthur John Vorwald, MD, died Dec. 1 at the age of 70. Doctor Vorwald had resided in Green Bay since his retirement in 1967. He was a graduate of the University of Chicago Medical School and was former pathology professor there, as well as director of the Trudeau Foundation and Saranac Laboratory at Saranac Lake, NY. He was past president of the Franklin County, NY, Medical Society.

Inga Werness, MD
Flint

Retired Flint otorhinolaryngologist Inga Werness, MD, died Nov. 1 at the age of 88. Doctor Werness was a graduate of the Detroit College of Medicine and Surgery.

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For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.

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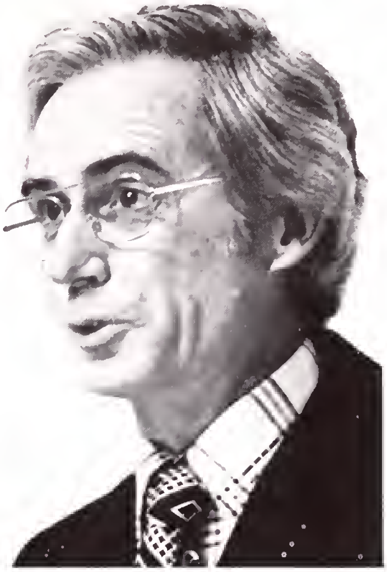
President's Page

MSMS Delegates Face Many Decisions



Doctor Masters

These are turbulent days. For every 24 hours the professional liability situation changes and commands new decisions and efforts by your officers and staff of MSMS. But there is so much more going on today and I address myself to the House of Delegates: "It is high time to consider the Annual Meeting coming up May 4-6!"

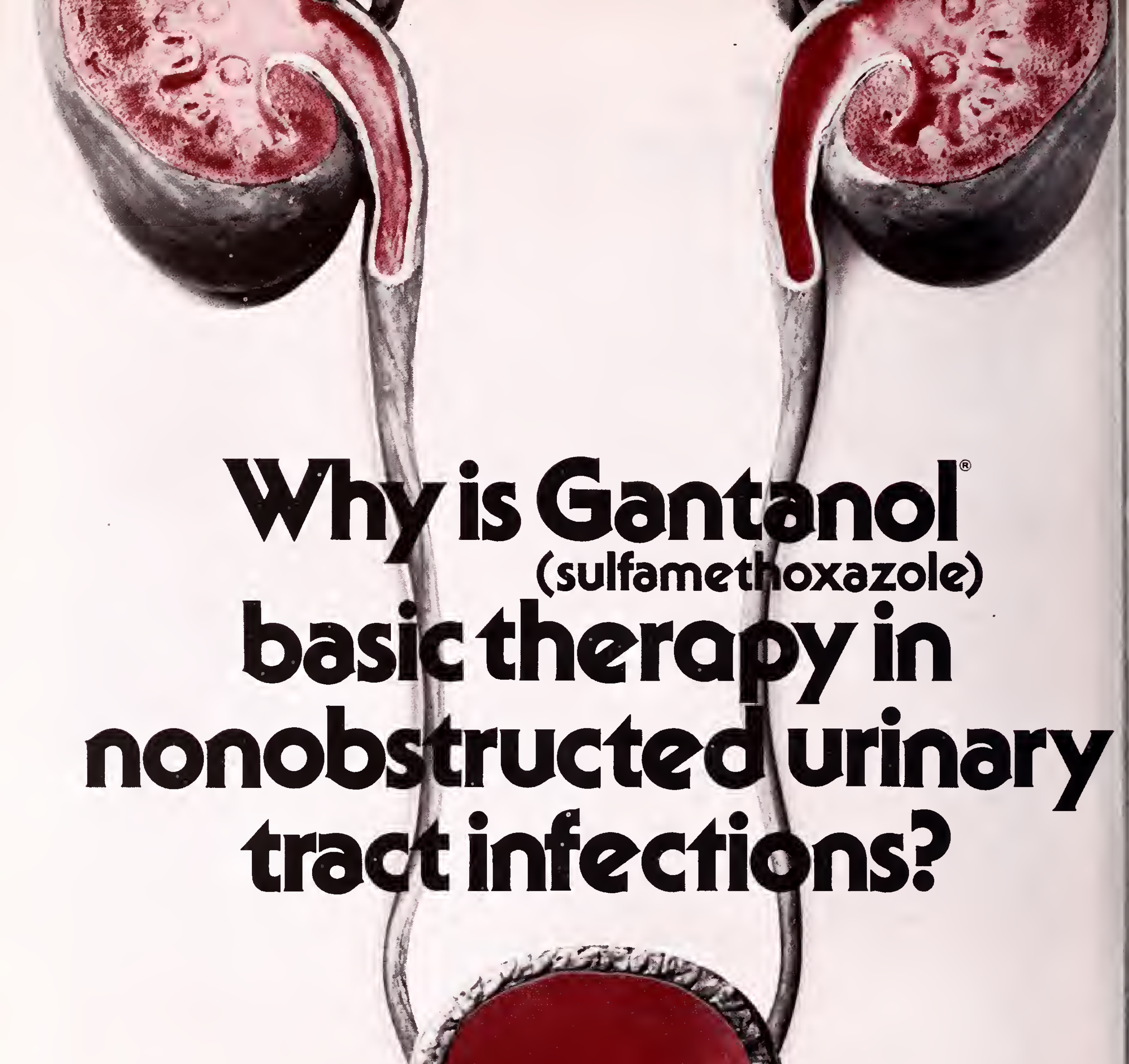
The "malpractice mess" is going to be resolved. It will leave us with many other problems, many of which are demanding intelligent decisions in 1975. I want to urge the delegates and every component society to consider the following issues and the need for possible policy decisions.

1. *Continuing Medical Education* –Dr. Louis Heideman's committee is due to report. How do you react to relicensure or recertification? A decision needs to be made.
2. *Comprehensive Health Planning* – This much-maligned or inadequately supported concept will not go away. It demands close scrutiny and more impact from MSMS.
3. *H.M.O.'s* — Innovative methods of health care delivery are needed. Surgi-Centers pose other questions. Are we really concerning ourselves with the future?
4. *PSRO – Peer Review* – There is a PSRO Support Center at MSMS. Are you using it? Are we *really* coming to grips with 1975 peer review? The new Medical Practice Act gives us new tools, but there are many pitfalls to full implementation.
5. *Relationship with Hospitals* — We still see too much of an adversary position between medical staffs and hospitals. Strange (isn't it?) when these are our workshops! Professional liability, PSRO; in fact, all of the above, logically demand a close relationship between our two groups. Have you considered your hospital administrator as an advisor to the executive committee of your county society? Nowhere does it seem to me to be more important that the House of Delegates exert its leadership towards the improvement of health care delivery than in policy-making towards the hospital salaried physician, the emergency department, professional liability, and many other areas.
6. *National Health Insurance* – This dialogue continues. It is high time for MSMS to take a policy position.
7. *Relations with 3rd Party Carriers* — Blue Shield does not go away. Somehow we continue to find it difficult to identify our proper role to this creation of the doctors of Michigan. We really should.
8. *Chiropractic* – This cult and others continue to illustrate the need of leadership in public education towards health. New courses need to be charted in our traditional role of guardians of the public health.

The times demand an informed House of Delegates, ready to debate the issues from an informed base on behalf of *all* the doctors in Michigan. The House must be ready to make solid decisions which will influence the practice of medicine in Michigan for years to come.

February is none too early for preparation for the May meeting!

Brooker L. Masters, MD



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pura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

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Reye's Syndrome in Michigan:
The 1974 Epidemiologic Experience

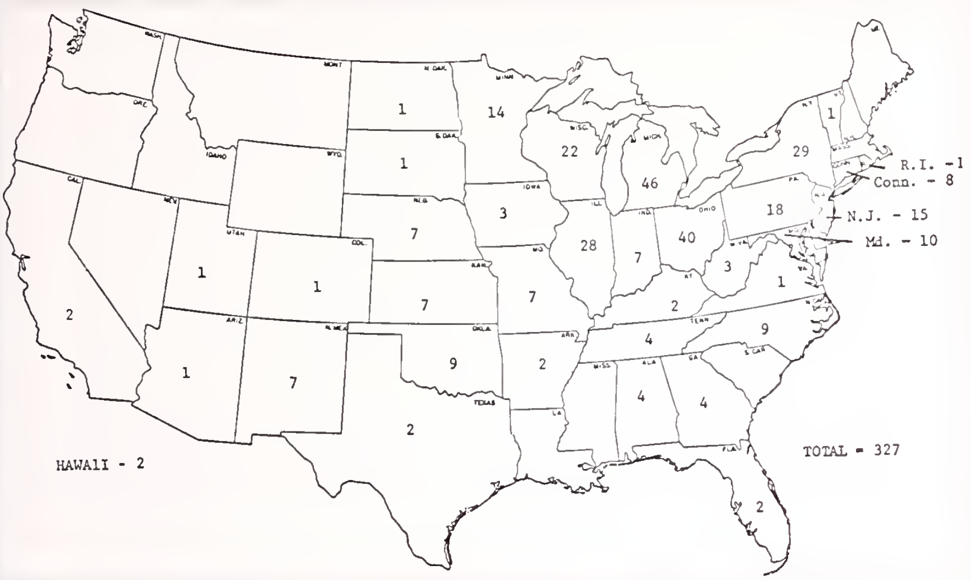

Figure 1. Reported Cases of Reye's Syndrome in the United States, January 1, 1974 – April 13, 1974. Reproduced with permission from Lawrence Corey, M.D., Viral Diseases Branch, Center for Disease Control, Atlanta, Georgia.

By Theodore R. Thompson, MD
Ralph C. Gordon, MD, East Lansing
Joseph V. Baublis, MD, Ann Arbor

Reye's syndrome a clinico-pathologic entity characterized by the acute onset of noninflammatory encephalopathy and fatty degeneration of the viscera, primarily the liver, was described originally in 1963 by Reye and associates.[1] Between January 1, 1974 and April 13, 1974, 46 cases of Reye's syndrome from 24 of 83 Michigan counties were reported to the Michigan Department of Public Health. The number of cases identified in the two years prior to 1974 in Michigan from death certificate data was 15.

The 46 reported cases in Michigan in 1974 represent 14 percent of the 32 nationwide cases from the 39 states reporting to the Center for Disease Control[2] during the same time period (*Figure 1*). Twenty-seven of the 46 cases were hospitalized in a two-week period extending from February 17 to March 2, 1974 (*Figure 2*). Each of the 46 cases fulfilled the criteria for the diagnosis of Reye's syndrome as outlined by the Center for Disease Control[3]: 1) acute onset of noninflammatory encephalopathy; 2) evidence of hepatic involvement by either biopsy or autopsy revealing fatty degeneration, or by an SGOT or SGPT level elevated at least two times above normal; and 3) no other reasonable explanation for the encephalopathy and hepatic dysfunction.

During the first quarter of 1974, student absenteeism due to a respiratory illness forced closure of schools in 28 Michigan counties *(Figure 3)*. This illness characterized by the acute onset of fever,

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Reprint Address: B-240 Life Sciences I, Michigan State University, East Lansing, Michigan 48824 (Dr. Gordon).

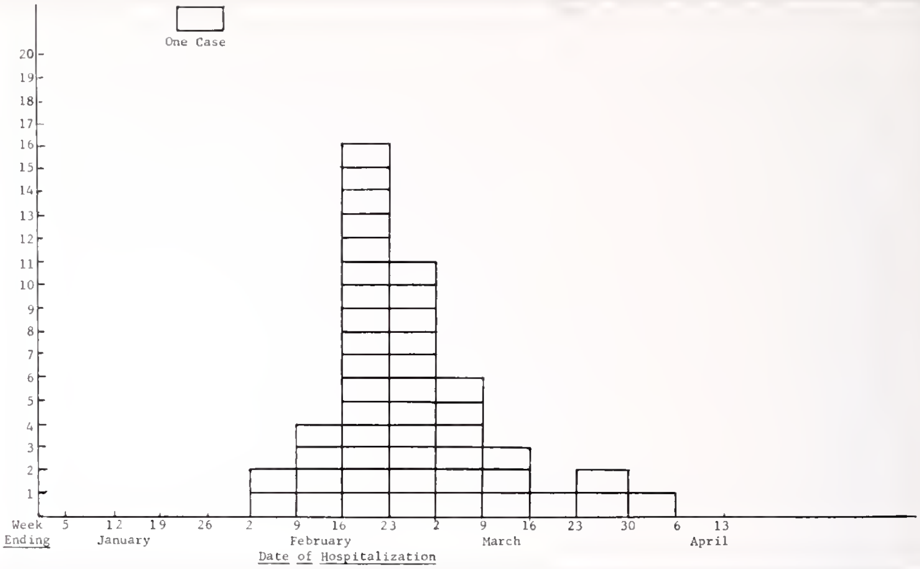
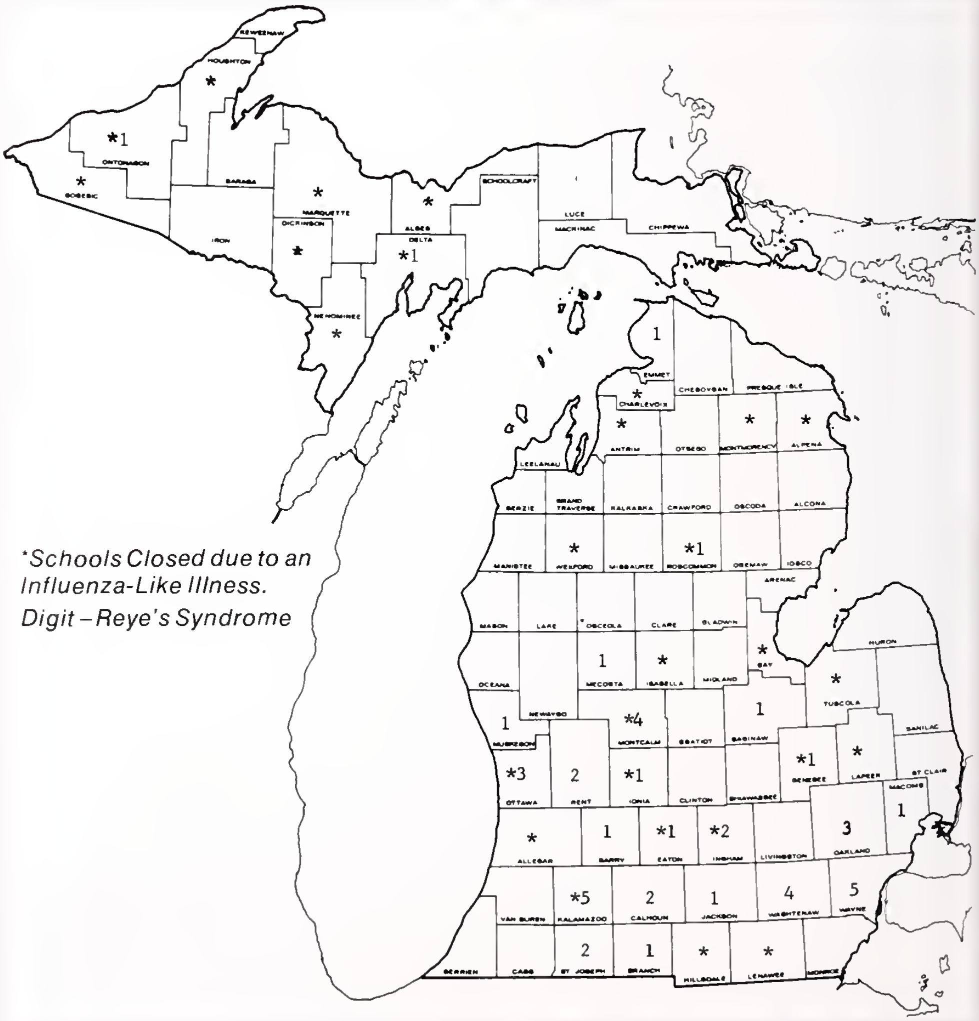


Figure 2. Distribution of 46 Cases of Reye's Syndrome in Michigan by Date of Hospitalization, January 1, 1974 to April 13, 1974.


*Schools Closed due to an Influenza-Like Illness.
Digit – Reye's Syndrome
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HOUGHTON
ONTONAGON
GOGEBIC
BARAGA
MARQUETTE
IRON
DICKINSON
ALGER
DELTA
SCHOOLCRAFT
LUCE
MACKINAC
CHIPPEWA
MENOMINEE
EMMET
CHARLEVOIX
CHEBOYGAN
PRESQUE ISLE
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VAN BUREN
KALAMAZOO
CALHOUN
JACKSON
WASHTENAW
WAYNE
BERRIEN
CASS
ST JOSEPH
BRANCH
HILLSDALE
LENAWEE
MONROE

Figure 3. Reported cases of Reye's Syndrome and reported School Closings due to an influenza-like illness in Michigan, January 1, 1974, – April 13, 1974.

cough, sore throat, myalgia, and malaise lasting from three to 10 days, was most likely caused by an infection with an influenza-B virus. Thus far in 1974, an influenza-B virus has been isolated by the Division of Virology, Michigan Department of Public Health, from six students, one pre-school child, and two adults living in five different counties all of which had reported school closings. Each of the nine individuals with a positive influenza-B culture had an illness with the signs and symptoms outlined above. In addition, 12 other students had serologic evidence of a recent influenza-B virus infection.

Cases of Reye's syndrome were concurrently reported from those counties that reported school closings due to an influenza-like illness (*Figure 3*). Nationally, Reye's syndrome cases were reported from areas with outbreaks of influenza-B infections. Forty-three of the 46 reported cases of Reye's syndrome had an illness characterized by fever, cough, sore throat, and malaise preceding by three to 14 days the onset of symptoms of cerebral dysfunction. Thus far, serologic tests on the sera of 16 of 21 (76%) of the individuals with the syndrome have been consistent with a recent influenza-B infection. Also, two of the 21 individuals had serologic evidence of a recent influenza-A infection. From none of the cases has a viral agent such as the influenza-A or -B virus been isolated; however only rarely has an agent been isolated from an individual with Reye's syndrome.[4-7] Previous studies relying on serologic data from cases of Reye's syndrome and family members have demonstrated an epidemiologic association between a preceding influenza-B viral infection and the onset of Reye's syndrome.[5,6,8,9] The marked increase in frequency of cases of Reye's syndrome in 1974 associated with influenza-B outbreaks in Michigan and in the nation further documents the epidemiologic relationship between these two disorders. In order to answer the question of the incidence of Reye's syndrome as related to influenza-B infections, a serologic study determining the incidence of recent influenza-B infections among students was conducted in May, 1974, by the Center for Disease Control, the Michigan Department of Public Health, and the Kalamazoo County Health Department in Kalamazoo County where five cases of Reye's syndrome were reported in 1974. Results of this study will be published at a later date.[2]

In previous studies, Reye's syndrome occurred most frequently in healthy children in the age groups, five months to 12 months and four years to nine years.[1,5,10] However, in one previous outbreak of the syndrome epidemiologically related to influenza-B infections, the median age was 11.0 years.[6] In Michigan in 1974 the median age of reported cases was 11.0 years (*Table 1*), identical to the median age recorded nationally.[11] Cases of the syndrome in Michigan ranged in age from two years to 28 years, with 45 of the 46 cases being less than 16 years of age and 41 of 46 cases being between five and 16 years of age. The 28-year-old individual was the oldest reported case recorded nationally in 1974.[2] Reye's syndrome occurred in males and females with nearly equal frequency in Michigan and nationally.[11]

Table I. Sex, Median Age, and Mortality Rate for Reported Cases of Reye's Syndrome in Michigan. January 1, 1974 — April 13, 1974.

	Number	Median Age (years)	Mortality Rate (%)
Male	24	9.5	5/24(21)[a]
Female	22	11.5	12/22(55)[a]
Total	46	11.0	17/46(37)

(a) $p < 0.05$ for male and female mortality rates in Michigan.

The overall mortality rate of 37% (17 of 46 cases) in Michigan compared favorably to the 39% mortality rate recorded for over 300 cases reported in the United States.[2] In Michigan, females had a significantly greater mortality rate ($p < 0.05$) than males (*Table 1*). Preliminary analysis of the over 300 cases reported nationally has revealed no significant difference in the female and male mortality rates.[2] No explanation is currently available to explain a significantly greater number of females ($p < 0.05$) who demonstrated decorticate or decerebrate posturing on or within eight hours of hospital admission than males (*Table II*). Twelve of 15 female cases and four of eight male cases with these central nervous system manifestations died.

Treatment regimens for Reye's syndrome cases included the following: conservative measures with insulin and hypertonic glucose, intravenous fluids, neomycin per os and per rectum, and/or agents to reduce intracranial pressure; nicotinic acid with the above measures; exchange transfusions with or without nicotinic acid plus the conservative measures; and peritoneal dialysis with the conservative modes of therapy. All 17 cases with only the less severe central nervous system manifestations of lethargy, delirium, agitation, and/or stupor treated conservatively survived as did five of six cases managed with other therapeutic regimens in addition to the conservative measures (*Table III*). One of nine patients with decorticate or decerebrate posturing treated conservatively and six of 14 cases treated with nicotinic acid and/or exchange transfusions or with peritoneal dialysis survived (*Table IV*). However, because of the small number of cases in each therapeutic regimen and because of the complexities and overlapping of the various regimens,

Table II. Central Nervous System Manifestations on or within Eight Hours of Hospital Admission of Male and Female Cases of Reye's Syndrome in Michigan, January 1, 1974 — April 13, 1974.

Central Nervous System Manifestations	Male Cases Alive	Dead	Total	Female Cases Alive	Dead	Total
Lethargy, delirium, agitation, and/or stupor	15	1	16[a]	7	0	7[a]
Decorticate or decerebrate posturing	4	4	8[b]	3	12	15[b]
Total	19	5	24	10	12	22

a. $p < 0.05$
b. $p < 0.05$

Table III. Treatment Regimens of Male and Female Cases of Reye's Syndrome with Lethargy, Delirium, Agitation and/or Stupor. January 1, 1974 — April 13, 1974.

Treatment Regimen	Male Cases Alive	Dead	Total	Female Cases Alive	Dead	Total
Conservative[a]	10	0	10	7	0	7
Nicotinic Acid	2	0	2	0	0	0
Exchange Transfusion	3	1	4	0	0	0
Peritoneal Dialysis	0	0	0	0	0	0
Total	15	1	16	7	0	7

a. Treatment with insulin and hypertonic glucose, intravenous fluids, neomycin, and/or agents to reduce intracranial pressure.

Table IV. Treatment Regimens of Male and Female Cases of Reye's Syndrome with Decorticate or Decerebrate Posturing. January 1, 1974 — April 13, 1974

Treatment Regimen	Male Cases Alive	Dead	Total	Female Cases Alive	Dead	Total
Conservative[a]	0	1	1	1	7	8
Nicotinic Acid	1	0	1	2[b]	0	0
Exchange Transfusion	2	3	5	2[b]	5	7
Peritoneal Dialysis	1	0	1	0	0	0
Total	4	4	8	3	12	15

a. Treatment with insulin and hypertonic glucose, intravenous fluids, neomycin and/or agents to reduce intracranial pressure.

b. Both females treated with a combination of nicotinic acid and exchange transfusions.

statistical significance could not be ascertained for the group of patients with the more advanced central nervous system manifestations.

Continued reporting of cases is necessary to further define the epidemiology of Reye's syndrome. Additional carefully controlled, prospective studies are definitely indicated to provide information regarding the cause(s), the pathogenesis, the most effective mode of therapy, and hopefully the prevention of Reye's syndrome.

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11. Morbidity and Mortality Weekly Report **23**:87, 1974.

National Center Reports Incidence of Reye's Syndrome

One in 5,000 cases of Type B influenza leads to Reye's Syndrome, reports the National Center for Disease Control.

The statistic is the outcome of a special study made last spring of 1,000 Kalamazoo children, after 127 U.S. children died following outbreaks of flu. Michigan led the nation with 46 cases of Reye's Syndrome, 17 of them fatal.

Results of the NCDC study were announced at a meeting of the Kalamazoo Academy of Medicine in late 1974.

Medical-Legal Opinions

"Hospital sues Blue Cross for monopoly violation"
District Court of Michigan, July 17, 1973 from *The Citation,* Vol. 28, No. 7

"Nontreating physician may not testify in rape case"
Michigan Court of Appeals, Dec. 7, 1972 from *The Citation,* Vol. 29, No. 1

"Suit against podiatrists' corporation not time-barred"
District Court of Michigan, Nov. 12, 1973 from *The Citation,* Vol. 29, No. 3

"Hospital liable for improper selection of cornea transplants"
Michigan Circuit, Wayne County, 1973 from *The Citation,* Vol. 29, No. 4

"Last treatment may be date of missed appointment"
Michigan Court of Appeals, Jan. 16, 1974 from *The Citation,* Vol. 29, No. 6

"Physician's travel expenses to seminar abroad may be nondeductible"
IRS Rev. Rul. 74-292, 26 CFR 1.162-2 (1974) from *The Citation,* Vol. 29, No. 10

"MD not liable for hospital attorneys' fees in reinstatement suit"
Michigan Court of Appeals, April 26, 1974 from *The Citation,* Vol. 29, No. 11

"Nursing home records ordered disclosed"
Michigan Court of Appeals, March 1, 1974 from *The Citation,* Vol. 29, No. 12

"Physician may be liable for patient's cardiac arrest"
Michigan Court of Appeals, June 24, 1974 from *The Citation,* Vol. 30, No. 1

"Physician convicted for bad-faith narcotic prescriptions"
Michigan Court of Appeals, Sept. 25, 1973 from *The Citation,* Vol. 30, No. 4

"Patient programmed not to sue for foreign body in 1959 operation"
Michigan Court of Appeals, Aug. 13, 1974 from *The Citation,* Vol. 30, No. 5

"Physician's conviction for performing abortion overruled"
Michigan Court of Appeals, Sept. 27, 1973 from *The Citation,* Vol. 30, No. 5

"Ban on teaching birth control in public schools upheld"
Michigan District Court, July 18, 1974 from *The Citation,* Vol. 30, No. 6

Here is Program

Fourteenth Annual Michigan Conference on Maternal and Perinatal Health

March 26-27, 1975
Grand Rapids Civic Auditorium
and Pantlind Hotel

Sponsored by MSMS Committee on Maternal and Perinatal Health and including meetings of Perinatal Association of Michigan and Michigan Section, Nurses Association, ACOG, District V

(The meeting is for physicians, nurses and students. There is no registration fee.)

Wednesday, March 26

(Morning program arranged by and for Michigan Section, Nurses Association, ACOG)

9 a.m. *Development of Parental Attachment,* Barry Wright, BA, East Lansing

9:45 a.m. *The Nurses' Role in Meeting the Parents' Needs,* Ruth Winkler, RN, Detroit

1:30 p.m. First Session, *Infection and the Unborn,* Hermann A. Ziel, MD, Lansing, moderator; *Antibiotic Therapy in Pregnancy,* Leon D. Sabath, MD, Minneapolis; *Fetal Effects of Maternal Infections,* Charles A. Alford, MD, Birmingham, Ala.; *Premature Rupture of the Membranes,* George H. Nolan, MD, Ann Arbor

3:30 p.m. Second Session, *Infection and the Newborn,* Doctor Ziel, moderator; *Neonatal Infection Surveillance,* Faye A. Luscombe, MPH, Kalamazoo; *What is the 'Contaminated' Newborn?* Thomas A. Helmrath, MD, East Lansing

6:30 p.m. Monte Carlo Night, cocktails, dinner and "Casino"

Thursday, March 27

8:30 a.m. Third Session, *Challenges in Perinatal Care,* Jan Schneider, MD, Ann Arbor, moderator; *Responsibilities of the Team Approach,* Barbara Bland, RN, Louisville; *Is the Amnion a Crystal Ball?* Dorothy A. Porter, MD, Detroit; *Who Gets the Monitor?* Bruce A. Work, Jr., MD, Ann Arbor; *How Much Oxygen is Enough?* John V. Hartline, MD, Kalamazoo; *An Attorney's Viewpoint,* Earl J. Cline, Flint

10:45 a.m. *Perinatal Benefits of Fetal Research,* Doctor Sabath

11:45 a.m. *Federal Guidelines for Perinatal Research,* Charles U. Lowe, MD, Bethesda

1:40 p.m. *Current Status of Regionalization,* Mary J. Kokosky, MD, Detroit

2 p.m. *Intensive Care Nursing for Neonates,* panel with Ronald L. Poland, MD, Detroit; Barbara Lanese, RN, Ann Arbor; Mary Ann Malcolm, RN, Royal Oak, and Linda Cotsonika, RN, Detroit.

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March 26-27, 1975, Civic Auditorium and Pantlind Hotel, Grand Rapids

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California Encephalitis in Michigan:

Coincidence or an Unrecognized Health Problem?

Abstract

The role of California encephalitis virus as an etiologic agent of human disease in the United States is reviewed and its known involvement as a human pathogen and zoonotic agent in Michigan is explained. Evidence is presented to support the hypothesis that it is a more significant health problem in Michigan than is presently recognized.

By Ralph J. Gorton, MS
Harold D. Newson, PhD, East Lansing
Richard Bail, MD, Boston

Arthropod-borne viruses (arboviruses) transmitted by mosquitoes have been known to cause central nervous system diseases in the United States since the 1930s when they first were incriminated as the causitive agents of human encephalitis. Five types, Eastern equine (EEE), Western equine (WEE), Venezuelan equine (VEE), St. Louis (SLE) and California (CE) encephalitis have been reported in epidemic or endemic forms.

Typical disease outbreaks involving EEE, WEE, VEE, and SLE viruses in this country have been dramatic and well publicized while human infections with California encephalitis virus (CEV) are more benign and therefore have received, proportionately, less attention. The importance of CEV, however, should not be underestimated since it now has become the leading cause of human arboviral encephalitis in the United States, with approximately 90 per cent of the human CEV infections thus far reported having occurred in the north-central portion of the country.[1]

Very little research on this disease has been conducted in Michigan, so there are great gaps in our knowledge concerning its incidence and distribution within the state. The purpose of this article is to alert clinicians to its presence in the hope that their increased awareness will result in more intensive efforts to obtain laboratory diagnoses on suspect patients and thus provide a better understanding of the epidemiology of the disease.

The clinical syndromes seen in human CEV infections in the United States have been associated with acute central nervous system infections and range from a mild and transient aseptic meningitis to severe encephalitis and death.

California encephalitis is now recognized as primarily a disease of children under the age of 15. Although clinical illness has been reported in older age groups most adult infections are thought to be subclinical.[2] Clinical infections are more frequent in males, and most reported cases have been associated with a rustic or rural environment. The disease has a marked seasonal incidence beginning in late May and extending into October, a period that coincides with peak mosquito populations. Disease onset in the majority of cases occurs during August. There is no apparent difference between the seasonal occurrence of cases in the north-central states and those in the southern part of the country.[2]

Acute clinical symptoms associated with typical CEV infections are fever, headache, nausea or vomiting, nuchal rigidity, convulsions and lethargy. Focal neurological signs, including paresis, paralysis and aphasia also are relatively common. In most confirmed cases the patients have been hospitalized two to three days after the onset of symptoms, and the acute febrile state of the illness has lasted from seven to 10 days. Some patients have remained comatose for five days or longer. Complete recovery is usual but some post-encephalitic behavioral changes in the form of irritability, aggression, forgetfulness, speech

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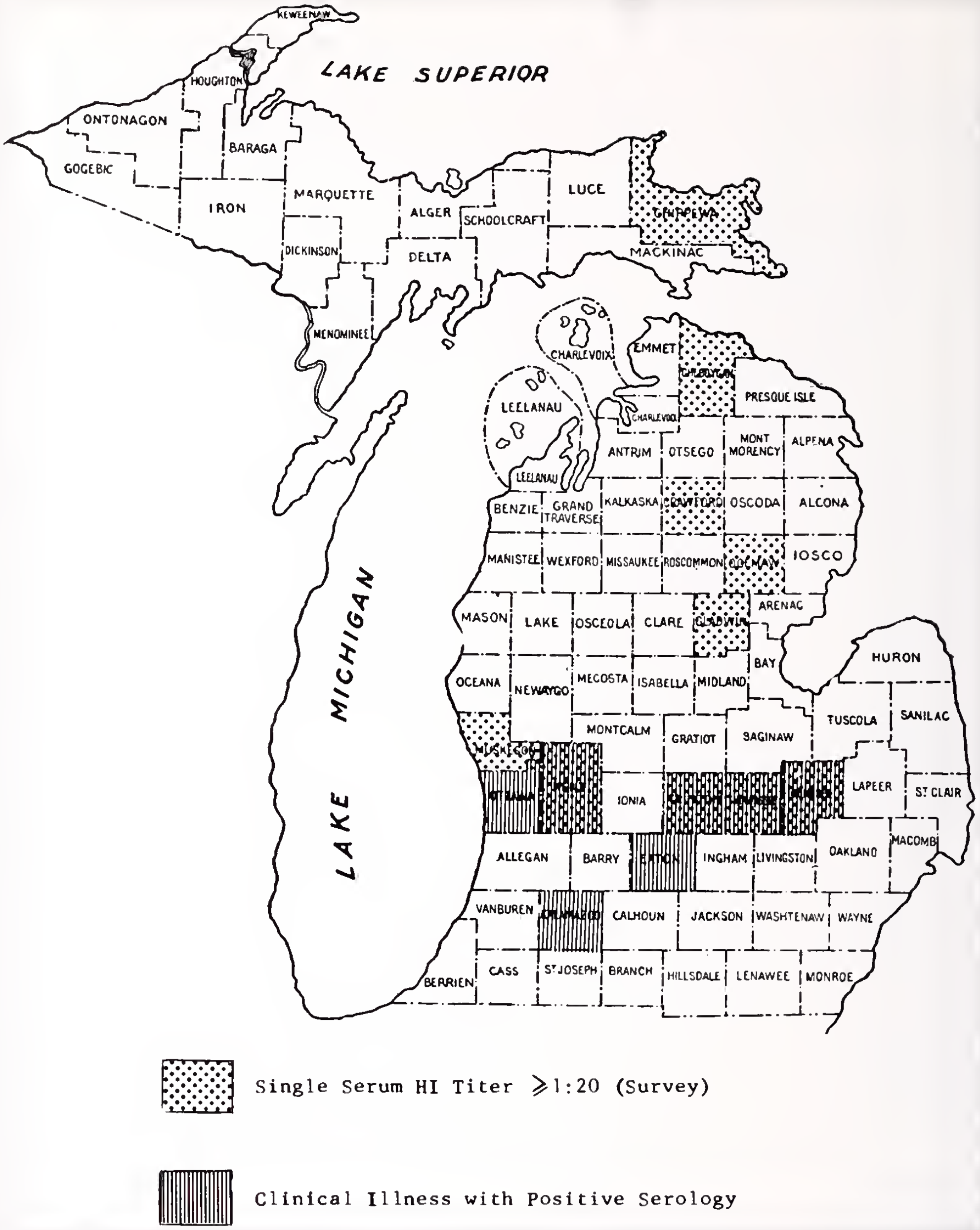
Mr. Gorton & Doctor Newson are with the Department of Entomology and Pesticide Research Center, Michigan State University, East Lansing. At the time of this writing, Doctor Bail was Epidemic Intelligence Service Officer, USPHS Center for Disease Control, assigned to Michigan State Department of Public Health. His present address is Boston City Hospital, Boston, Mass.

Michigan Agricultural Experiment Station Journal Article No. 6831.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ALLEGAN
BARRY
EATON
INGHAM
LIVINGSTON
OAKLAND
MACOMB
VANBUREN
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Clinical Illness with Positive Serology

Fig. 1. Location, by county, of Michigan residents with serological evidence of CEV infection.

changes and impaired scholastic ability have been reported.[3,4]

Unlike the other types of arbovirus encephalitis cases that occur in the United States, very few deaths have been associated with CEV infections. The first documented fatality due to CEV occurred in 1960 and was retrospectively diagnosed in 1964. The patient was a four-year-old girl who became ill in September 1960 and was hospitalized in La-Crosse, Wisconsin, with a diagnosis of meningoencephalitis. She died on the sixth day of illness with hypotension and respiratory distress. At autopsy, signs of pulmonary and brain adema were present, and histological changes, consisting of neuronal degeneration, patches of inflammation and perivascular edema and cuffing were most apparent in the cerebral cortex and basal ganglia. Since the changes noted were similar to those described for known forms of arboviral encephalitis, attempts were made at that time to isolate and identify the etiologic agent. These were unsuccessful. Four years later, however, Thompson and his associates were able to isolate the LaCrosse subtype of CEV from frozen brain tissue obtained at autopsy in 1960.[5] Since that time only two other fatalities due to CEV infections have been reported in this country.[2]

The prototype strain of California encephalitis virus was first isolated from a mosquito, *Aedes melanimon,* in California in 1943 and was later implicated as the causative agent of three human cases of encephalitis that occurred in California's San Joaquin Valley in 1945.[6,7] For the next 15 years there were no recorded human CE cases in the United States. By 1960 improved virus isolation techniques had become available and evidence began to accumulate that implicated this virus as the etiologic agent in a variety of clinical syndromes that included encephalitis and aseptic meningitis.

The increasing importance of CEV as a human pathogen was emphasized in 1964 when a small epidemic of central nervous system disease was investigated in Indiana, and 11 children were found to have had encephalitis caused by this agent. In the same year additional human cases were discovered in Ohio, Minnesota, North Carolina and Wisconsin, thus demonstrating the widespread distribution of the disease. As a result of these and other similar findings, an increasing number of diagnostic laboratories began to include CEV reagents in their serological tests for central nervous system disease and undiagnosed influenza-like syndromes, particularly among children. The Virology Laboratory of the Michigan State Department of Health began their testing program in 1968.

Human CEV infections now have been recorded in 18 states but the overwhelming majority of the cases reported have occurred in just six states in the north-central part of the country.[8,9] These are: Indiana; Iowa; Michigan; Minnesota; Ohio; and Wisconsin. All but a few of these cases have been reported since 1964.[10] The number of reported cases does not necessarily represent the total number of infections that actually occurred since this is not a reportable disease and clinicians often do not attempt to obtain a definitive diagnosis for every suspect patient.

Most CEV infections have been found in those states where interested investigators have been actively looking for them. Both Ohio and Wisconsin, for example, have conducted much more aggressive investigations and case finding programs than their neighboring states and it is quite likely that this, in part, accounts for the larger number of CEV infections that have been reported from those two states. (Approximately 60 per cent of the 500+ confirmed cases in the United States.) The disparately small number of cases reported thus far from Michigan (11 confirmed or presumptive) may indicate a true difference in endemicity or merely reflect the limited investigative efforts that have been expended in this state.

Whatever the true incidence may be, CE infections now are known to occur regularly in the north-central United States, and as diagnostic reagents and laboratory methodology improve and clinical awareness increases, it seems highly probable that it will be recognized as an increasingly important human disease problem in this area.

While the medical importance of this disease is reflected by its occurrence and effects on man, it is primarily a zoonosis in which human infections are only incidental to natural transmission cycles that involve wild mammals as the principal vertebrate hosts and mosquitoes, mainly *Aedes* species, as the arthropod vectors.[2] Unlike reported human cases, CEV infections in wild host mammals seem to produce minimal morbidity which may suggest a long association between these viruses and their natural vertebrate hosts with the consequent development of a balanced host-virus relationship.

Using currently accepted terminology there are eight closely allied subtype CE viruses that have been isolated in the United States from humans, mosquitoes and mammals. These are called collectively, the California encephalitis virus complex.

Only four subtypes in this group have thus far been associated with human infections: The California subtype isolated in California in 1943; the LaCrosse subtype isolated in 1965 from the first reported fatal human infection; the Trivittatus subtype, originally isolated from a mosquito collected in North Dakota in 1948 and subsequently found associated with a human infection in Minnesota in 1970; and the Jamestown Canyon subtype, first isolated from a mosquito collected in Colorado in 1961 and recently found to be involved in human infections in Wisconsin.[9,11]

All available evidence indicates that the LaCrosse subtype has been responsible for most of the known human cases. The classification of the CEV subtypes is still only tentative, primarily because of the difficulty in evaluating the significance of relatively minor serological differences that have been found between the numerous types or strains isolated from various sources. It is obvious that the relationships between the various CEV subtypes, their human and wild animal hosts and mosquito vectors are poorly understood and that knowledge concerning the epidemiology of this virus complex is fragmentary at best. For further insight and a more complete discussion of current knowledge on this subject, the reader is referred to the excellent review articles by Henderson and Coleman[2] and Sudia, *et al.*[9]

The first evidence of the existence of California encephalitis virus in Michigan was reported in 1963 by Newhouse, *et al.* who found neutralizing antibodies in snowshoe hares collected in the Upper Peninsula.[12] With the discovery of human CEV infections in adjacent states during the early 1960s and the detection of CEV antibodies in snowshoe hares from Michigan, the question arose as to whether or not there were also human infec-

Table I. Michigan Animals With Serological Evidence of CEV Infections[1,2]

Species	No. Pos./No. tested	Collection locality of positive specimens
Snowshoe hare (*Lepus americanus*)	26/160	Garden and High Islands — Northern Lake Michigan
Deer (*Odocoileus virginianus*)[3]	3/132	Gladwin and Newaygo Counties, Bois Blanc Island — Northern Lake Huron
Fox Squirrel (*Sciurus niger*)	3/32	Clinton and Ingham Counties
Chipmunk (*Tamias striatus*)	6/38	Ingham County, Garden and High Islands
Raccoon (*Procyon lotor*)	1/26	Clinton County
Bluejay (*Cyanocitta cristata*)	3/21	Garden and High Islands
Pheasant (*Phasianus colchicus*)	2/2	Clinton County

1. Data provided by Dr. M. E. Becker, Virology Laboratory, Michigan Department of Public Health.
2. Specimens collected and submitted by personnel of Michigan Departments of Public Health and Natural Resources (DNR) and Michigan State University.
3. Samples obtained at hunting checkpoints during deer season.

tions occurring in the state. In 1968 reagents became available for hemagglutination inhibition tests (HI) and the Michigan State Department of Public Health (MDPH) Virology Laboratory added this test, using the LaCrosse subtype antigen, to its standard battery of virus diagnostic procedures. The MDPH testing program for CEV antibodies has consisted of the following elements.

1. Screening of sera from children, up to 16 years of age, who had undiagnosed CNS disease with onset during the mosquito season. The sera were tested only after they had been found negative to all the usual antigens in the meningitis-encephalitis complement-fixing battery: Herpes, measles, mumps, polio, varicella-zoster and the equine encephalitides.

2. Serologic surveys of supervisory personnel from the State Parks Division, Michigan Department of Natural Resources.

3. Limited serologic surveys of animals collected in Michigan — a cooperative project with the Michigan Department of Natural Resources and Michigan State University.

Stationary HI titers $\geq$ 1:20 were considered evidence of prior infection with CEV. Paired acute and convalescent sera having a titer change of 4-fold or greater were considered indicative of a recent or current CEV infection.

The first human case detected in the MDPH program was a four month old boy in St. Johns, Clinton County who became ill during the summer of 1968. From that time through the summer of 1973 nine additional Michigan patients have been found whose clinical illnesses were confirmed CEV infections.[13] Epidemiological data concerning these patients is fragmentary but it does appear probable that three of the 10 infections were contracted in the vicinity of the patients' homes in Michigan. Eleven additional individuals with significant HI titers have been found in the human serology surveys but the epidemiological significance of these cases is not clear. To date a total of 667 Michigan residents have been screened for CEV antibody. The distribution, by county, of all positives is given in *Figure 1*.

Studies in other states have shown that the true incidence of CEV infections may be far greater than reported and that specific and directed efforts are required to obtain comprehensive epidemiological information. [10, 14, 15, 16] The only detailed study made in Michigan supports the contention that significantly more human infections may have occurred than have been reported.[17] In this study four out of 16 children under 15 years of age were found to have definite serological evidence of prior infections, none of which had been reported. Only one of the four had a clinical history of CNS disease that might suggest CE infection. The children in this study lived in close proximity to two confirmed cases.

Of the wild animal sera tested, HI antibodies $\geq$ 1:20 have been found in four species of mammals and two bird species. The mobility of mammals is relatively limited so it can be assumed that their infections were acquired in the general vicinity of their capture (*Table I*). The significance of the antibodies found in the birds is not known since avian species reportedly play no appreciable role as natural hosts of CEV in the United States. Titers in sera from additional wild animal species (5 bird and 7 mammal) have been either negative or $<$ 1:20. It should be emphasized that only one animal collection has been made in the vicinity of a confirmed human case of CE. Three of the 19 animals collected there had HI titers ≥ 1:20.

Two mosquito species, *Aedes triseriatus* and *A. canadensis* have been incriminated as major CEV vectors in Wisconsin and Ohio, respectively.[9, 18] Both species are commonly found in wooded areas throughout most of Michigan. Sixteen additional mosquito species, from which one or more subtypes of the CEV complex have been isolated in other parts of the United States, also are present here but their roles in the transmission of these viruses in Michigan is presently unknown.

No virus isolation attempts have been made from human or animal sera or mosquitoes collected in Michigan so it is not known what subtypes of CEV are involved here. Although a number of the human and animal sera tested thus far have been positive, it is difficult to evaluate the negative or equivocal HI test results observed since it is known that antigens in the CEV group may not cross-react with antibodies produced against heterologous subtypes.[19] It is therefore possible that both human and animal infections with CEV subtypes other than LaCrosse, have gone undiagnosed.

In summary, CEV exists in Michigan in both endemic and enzootic states and virus transmission by indigenous mosquitoes has occurred in areas of the upper and lower peninsulas. Several species of wild animals are known to be involved in natural transmission cycles and human infections presumably occur when individuals intrude into localities where natural transmission cycles are active. Data now available are much too incomplete to indicate the true incidence or distribution of CEV infections within Michigan and specific endeavors will be required to obtain this information. The assistance and cooperation of physicians and local medical treatment facilities will be invaluable in these efforts.

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Program

Medical Aspects of Sports Medicine

March 14-15, Ann Arbor Inn, Ann Arbor

Co-sponsored by Michigan State Medical Society
Great Lakes Athletic Trainers Association

The program is for coaches, trainers, students and physicians.

Friday, March 14

8 a.m. Registration

9 a.m. *Proper Use of Drugs and Medication in the Sports Medicine Program,* Gerald A. O'Connor, MD, U-M Team Physician

9:30 a.m. *The MD's Bag,* Joseph D. Godfrey, MD, team orthopedist, Buffalo Bills

10:30 a.m. *Basic Guidelines for Evaluating Injuries on the Field,* William Fishbaugh, MD, team physician, and Kenneth Kopke, athletic trainer, CMU

1:15 p.m. Concurrent Sessions, *New Concepts in Helmet Design,* Richard Schneider, MD, chief of neurosurgery, U-M Hospital; or *Thigh Contusions,* James Nice, athletic trainer, Toledo University

2 p.m. Concurrent Sessions, *Pinched Nerve Syndrome,* Doctor Godfrey, or tour of U-M Training Room by U-M training staff

3:15 p.m. *Scientific and Practical Feeding of Athletes,* Olin Mickelsen, PhD, MSU Department of Food Science

4:15 p.m. *Rehabilitation Exercises for the Knee,* Otho Davis, athletic trainer, Philadelphia Eagles

Saturday, March 15

8:15 a.m. High School Athletic Trainers Panel, *Some Common Problems,* Thomas Webb, Saginaw; Jeffery Clark, New Trier, Ill.; Daniel Minert, Brighton, and Don Ogle, New Albany, Ind.

9 a.m. *The Female Athlete – Is There a Difference?* Marge Albohm, Athletic Trainer, Indiana University

10:30 a.m. *Foot and Leg Problems among Track Men,* L. Paddock, U-M Assistant Trainer

11:15 a.m. *Physiology of Skeletal Muscle: Contraction, Stretching, Fatigue, Injury and Recovery,* John Faulkner, PhD, U-M

Registration Form
Medical Aspects of Organized Athletics
March 14-15, 1975, Ann Arbor Inn, Ann Arbor

Enclosed is my check or money order for $10 (Registration fee for physicians, trainers and coaches)

Name ______________________________

Address ______________________________

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Please make checks payable to Michigan State Medical Society, 120 W. Saginaw St., East Lansing, Mich. 48823 and mail to MSMS c/o Ms. Helen Schulte.

Absorption Capacity Of The Upper Airway And Lungs

Part I – General Concepts

By Gianfranco Dal Santo, MD, Detroit

One of the most important nonrespiratory functions of the respiratory tract is the absorption of substances that enter the respiratory system.

Site, mechanisms and rate of absorption differ according to the nature and size of the substances *(Fig. 1):*

a) Small substances: (6-0.1 μ or smaller) are rapidly absorbed into the pulmonary capillaries and into the lymph vessels of the lungs. However, since the rate of absorption into blood is significantly greater than that into lymph vessels, blood absorption appears predominant. These substances are absorbed by crossing the cuboidal and/or the squamous living cells as well as by penetrating their intercellular spaces.

By electron photomicrography it has been demonstrated *(Fig. 2)* that the epithelial cells that cover the alveolar surface possess thin cytoplasmic extensions over the alveolar capillaries. These extensions act as a living membrane and are the site of exchanges.

b) *Inorganic ions* are absorbed quickly in a manner that resembles the diffusion of gaseous molecules. Their appearance in the blood is almost instantaneous and compares with that of intravenous injection.

Although there is no doubt that absorption of small substances occurs at the level of the bronchioles, its degree cannot compare with that from the alveoli.

c) *Larger particles* – charcoal, silica, cement dust, India ink — are absorbed exclusively by the lymphatic system. Absorption of these particles occurs through the spaces between the ciliated cells of the upper airway and/or through the spaces lined by cuboidal or squamous cells. The absorption can be free or more frequently can be mediated through *phagocytosis.*

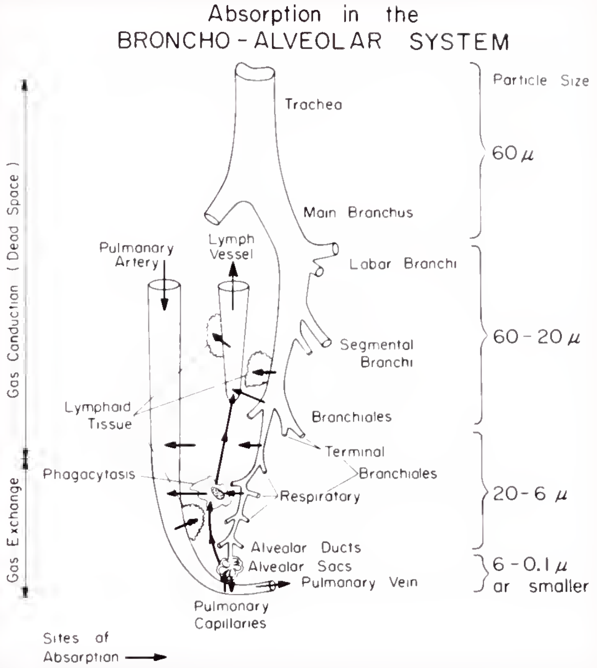
Absorption in the
BRONCHO - ALVEOLAR SYSTEM
Particle Size
Trachea
60 μ
Main Bronchus
Lobar Bronchi
60 - 20 μ
Segmental Bronchi
Bronchioles
Terminal Bronchioles
Respiratory
20 - 6 μ
Alveolar Ducts
Alveolar Sacs
Pulmonary Vein
6 - 0.1 μ or smaller
Pulmonary Capillaries
Pulmonary Artery
Lymph Vessel
Lymphoid Tissue
Phagocytosis
Gas Conduction (Dead Space)
Gas Exchange
Sites of Absorption →

Fig. 1. Schematic picture of upper airway and respiratory units. Absorption rate of substances depends on their nature and size, as well as on ventilation and conditions of the respiratory tract.

Once in the lymph capillaries, such particles adhere to the lymphatic vessels walls or are carried into the regional lymph nodes. When not absorbed, large particles are cleared from the upper respiratory tract by ciliary action and by the motion of the mucous blanket which covers the surface of the upper airway.

The *phagocytic cells (Fig. 3)* are large cells derived from the epithelium of the alveolar surface. As soon as large particles — such as dust — are ingested by phagocytes, the latter desquamate, migrate and act like wandering scavenger cells. These cells are also termed "alveolar macrophages."

If the ingested matter is a droplet of fluid, the process is called *pinocytosis.* In both processes, villus-like projections of cytoplasm extend around each side of the particle or droplet. Alveolar phagocytes move in an ameboid manner. They can

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Presented at the 19th annual All-Day Scientific Session of the Michigan Society of Anesthesiologists, May 11, 1974, Southfield, Michigan. Personal data reported in these articles were obtained with the aid of a Detroit General Hospital Research Corporation and United Health Foundation grant.

Part II will appear in the March issue of Michigan Medicine.

The author is professor of anesthesia, Wayne State University School of Medicine, Detroit.

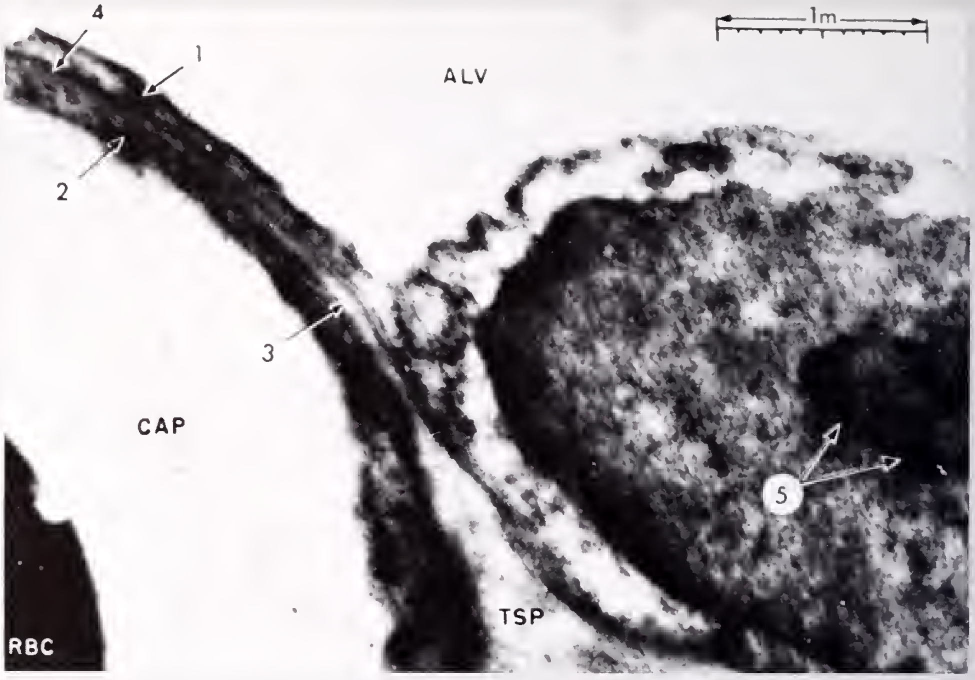


Fig. 2. Electron photomicrograph of a portion of the alveolar wall. The thin cytoplasmatic extensions (1) of an alveolar epithelial cell over the pulmonary capillary endothelium (2) is shown. This extension forms a living membrane which is the site of active exchanges.

migrate and reach the mucous blanket by which, together with the phagocited particles, they are cleared outside. Phagocytes can also cross the alveolar wall and penetrate into the lymphatic vessels in the interstitium of the lungs.

d) *Water* is routinely absorbed by the mucosa of the respiratory tract. Water present in the gas of the airway originates a) from the water vapor contained in the inhaled gas mixture; b) from water obtained by evaporation from the nasal mucosa; and c) from any moisture artificially added to the inhaled gas mixture. Absorption can occur at any level of the upper airway and lungs. Its rate will depend on particle size and ventilatory pattern.

In considering the absorption capacity of the respiratory tract there are several points of interest for the physician:

Absorption of aerosols: Aerosol therapy for respiratory disorders is today a commonplace in the physician's armamentarium. An *aerosol* is simply a suspension of fine particles of liquid or solid in a gas. To acquire stability as a gaseous suspension, the size of the particles must be fine enough to possess a low-settling velocity.

In order to reach the most distant subdivisions of the upper airway and lungs (where the absorption is higher), the size of the aerosol particles must fall below 3 μ. To exert their pharmacological response, aerosols must be deposited on the bronchiolar and/or alveolar surface (1).

The rate of absorption that follows deposition of aerosols has not yet been adequately investigated. We will report in Part II some experimental data from our laboratory.

Absorption of other drugs: If aerosols and foreign substances are absorbed so rapidly, one wonders why the respiratory tract could not be used as a route of administration of other drugs. For instance, during cardio-respiratory resuscitation it could be beneficial to administer adrenaline and other useful drugs via the endotracheal tube. The advantages appear quite evident:

- The administration would be conducted without the delay caused by establishing an intravenous infusion.
- Delay and complications in performing an intracardiac administration could be avoided.

Experimental data (2) seem to suggest that the intratracheal administration of 1 mg. of adrenaline diluted in 10 ml of water is just as effective as the intracardiac and intravenous administration.

Absorption of gastric content: Pulmonary aspiration of gastric content is a common, serious and not infrequently fatal event. It is said to occur most often in obstetrical patients. However, it indeed happens in patients undergoing emergency surgery, during general anesthesia and in unanes-

(Continued on page 85)

Putting out the fires of arthritic pain

Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed: "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."*

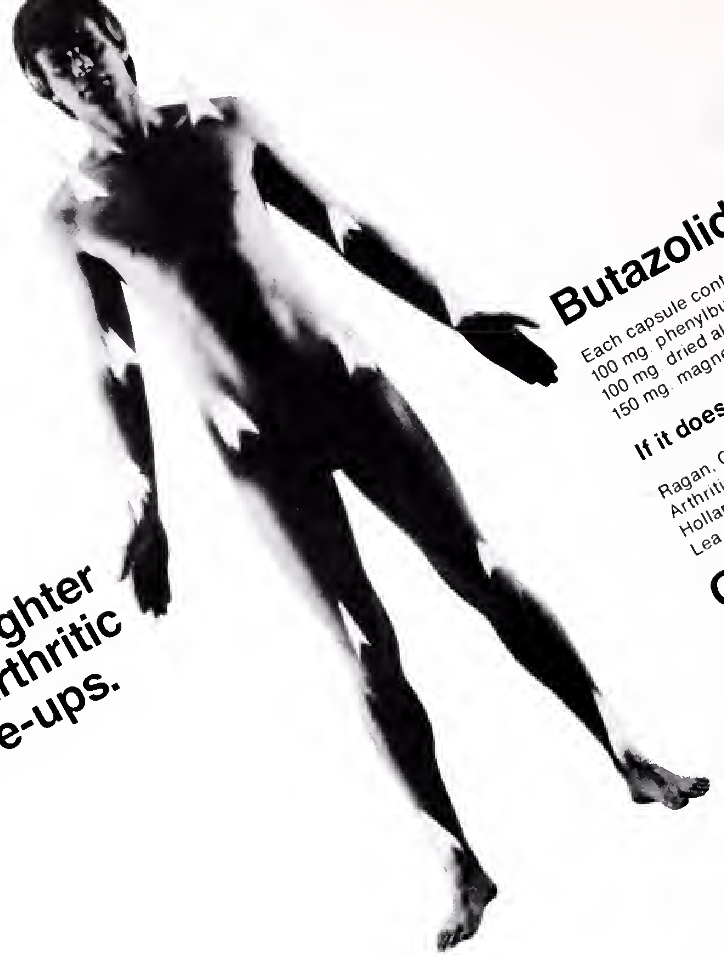
If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.

Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.



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100 mg. phenylbutazone USP
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150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.

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Geigy

Fire fighter for arthritic flare-ups.

Important Note This drug is not a simple analgesic Do not administer casually Carefully evaluate patients before starting treatment and keep them under close supervision Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently Warn patients not to exceed recommended dosage Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy Dosage should be taken with meals or a full glass of milk Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema A one-week trial period is adequate Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty

Indications. Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis

Contraindications Children 14 years or less, senile patients, history or symptoms of G I inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias, renal, hepatic or cardiac dysfunction, hypertension, thyroid disease, systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy

Warnings. Age, weight, dosage, duration of therapy existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug Use lowest effective dosage Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions The disease condition itself is unaltered by the drug Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G I tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy The majority of these patients were over forty Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug, its misuse can lead to serious results. Review detailed information before beginning therapy Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy, CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia, ulcerative stomatitis, salivary gland enlargement
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For complete details, including dosage, please see full prescribing information.

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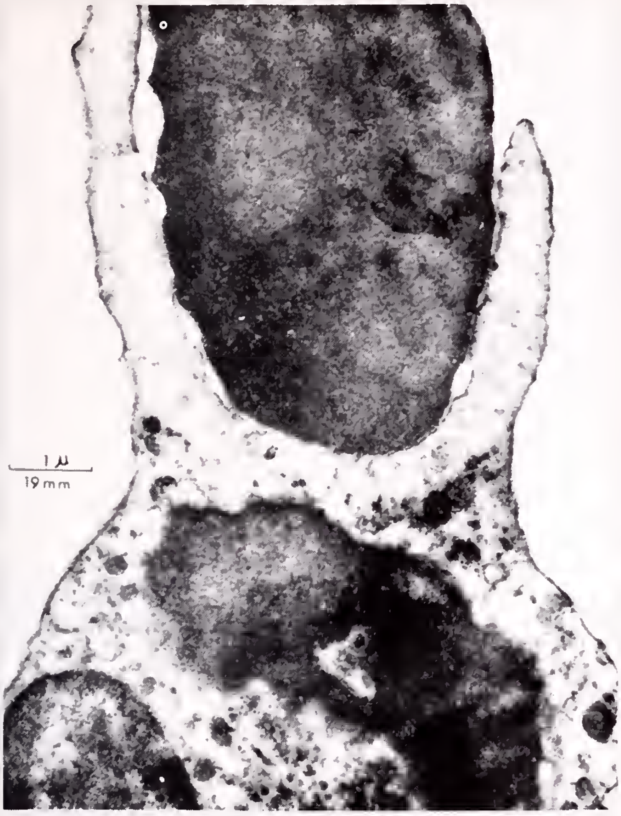

Fig. 3. Electron photomicrograph of an alveolar phagocitic cell in action. The villus-like projections extend around each side of a red blood cell.

thetized unconscious or semiconscious subjects (e.g. drugs, intoxication, alcoholic stupor, cardiac arrest, acute respiratory insufficiency, convulsive disorders, drowning or tube feeding).

The immediate effect of pulmonary aspiration of gastric content is a chemical pneumonitis, the degree of which depends on the pH of the aspirated gastric content (3). In Part II we will report some experimental data.

The absorption capacity of the respiratory tract also acquires importance in a) the resolution process of pulmonary edema; b) the absorption of water during humidification of the airway; c) in controlling infections through bacterial absorption; and d) in controlling uptake of particulate matters that pollute the atmosphere.

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Monthly Surveillance Report

Cases of Certain Diseases
Reported to the Michigan Department of Public Health

For the four-week period ending December 27, 1974

	1974 This 4-Week Period	**1973 Same 4-Week Period**	**1974 Total To Above Date**	**1973 Total Same Date**	**Total Cases for 1973**
Rubella	43	59	1,388	2,001	2,001
Cong. Rubella Syndrome	1	3	1	4	4
Measles	145	64	2,365	4,552	4,552
Whooping Cough	13	14	104	86	86
Diphtheria	0	0	0	0	0
Mumps	956	467	7,230	5,042	5,042
Scarlet Fever & Strep Sore Throat	2,071	3,343	31,802	24,467	24,467
Tetanus	1	1	5	2	2
Poliomyelitis (paralytic)	0	0	1	0	0
Hepatitis	203	301	3,599	3,872	3,872
Salmonellosis (other than S. typhi)	72	82	1,001	795	795
Typhoid Fever (S. typhi)	0	1	11	14	14
Shigellosis	113	54	1,436	623	623
Aseptic Meningitis	13	20	162	434	434
Encephalitis	3	6	69	163	163
Meningococcic Meningitis	6	6	54	54	54
H. Influenza Meningitis	10	6	121	89	89
Tuberculosis	91	107	1,279*	1,486	1,473*
Syphilis	160	311	2,659	4,330	4,374*
Gonorrhea	2,418	2,717	32,153	31,151	31,086*

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

Information can be supplied by the local health department on the local incidence of disease.

Maurice Reizen, M.D., Director
Michigan Department of Public Health

*Corrected totals.

Letters

Crib Death Article Concerns NY Doctor

To the editor,

I am writing to express my concern over the publication of "Crib Death: Disease or Accident?" in the November 1974 issue of MICHIGAN MEDICINE.

The article expounds upon a theory of the etiology of Sudden Infant Death Syndrome (SIDS) held by the authors Karl J. Kadlub, Ph.D. (a psychologist) and K. Gregory Kadlub (a pre-medical student). Their theory has no basis in fact (no references cited) and is not supported by any of their own research or clinical experience.

I am concerned that you have given credence to an unscientific pronouncement and that this credence has earned the authors a wide audience through the lay press. The publicity the Kadlub theory has received has, in my opinion, done immeasureable harm to all parents who have lost an infant from SIDS by adding (or increasing) guilt feelings to the grief they have suffered. In addition the advice the Kadlubs give concerning the feeding of infants will create undue anxiety in untold numbers of new and potential parents surrounding the frequency and technique of infant feeding.

Sincerely,

Robert A. Hoekelman, M.D.
Acting Chief of Pediatrics
University of Rochester
Strong Memorial Hospital
Medical Center
Rochester, New York

Doctor Kadlub replies

To the editor:

Thank you for the news articles, Dr. Robert Hoekelman's letter, and the opportunity to respond to it.

At the outset let me share with you some evidence that many are not in accord with Dr. Hoekelman's views. Enclosed is a Chicago *Sun-Times* article, Nov. 26, which suggests that *Michigan Medicine* has already influenced the direction of some research on SIDS. It indicates that in their new coordinated attack on the problem, data gathering at the Stritch School of Medicine SIDS Center will include the study of a wide number of variables including "feeding techniques."

A recent letter from *Pediatrics Digest* states that they regard "Crib Death: Disease or Accident?" favorably, and it has been selected by the editors for publication. It is also noteworthy that the paper received positive and enthusiastic response when presented at the 19th Annual Midwinter Medical Conference Jan. 26-31 at Boyne Falls.

I have not received a single letter indicating increased guilt or grief experienced by parents consequent to reading about the paper. The vast majority express congratulations and typically express relief at hearing an explanation that makes some "sense" out of deaths that seem to be without cause or reason.

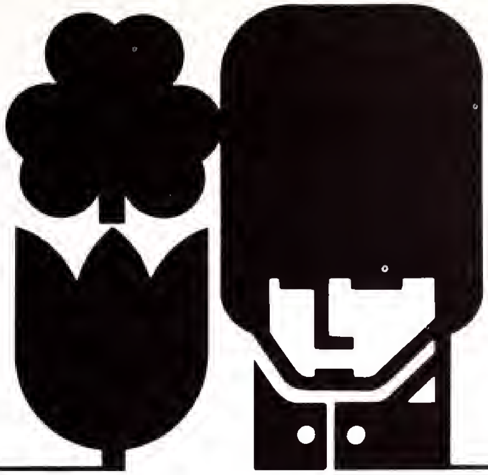
All theories are propositions which serve to stimulate interest, they are means of pointing direction and furthering investigation. In short, the purpose of theories is their heuristic value in research design providing they are carefully thought out and logically constructed. In this regard it might be added that on the basis of the principal facts regularly associated with SIDS, logic dictates that disease should be an hypothesis of last resort.

With regard to the absence of references, we believed the reason was obvious. There is no paper in the literature over the recent years, to our knowledge, which associates SIDS to gastrointestinal structure. Moreover prevailing current opinion uniformly repudiates suffocation as the cause of death, and touts disease hypotheses to be the enlightened position. Who could we list in support of our paper? Who would not have been offended by it if we did?

Some preliminary evidence has come in to support the position that SIDS is primarily a gastrointestinal event, and that suffocation is merely an incidental factor; i.e. unsolicited letters from mothers who were fortunate enought to interrupt SIDS, in its incipient stages, in their own young. These were independently written, by women scattered throughout the states, in which the same sequence of events is recorded.

When the mothers chanced upon these infants they were, ". . . stiff and purple . . . couldn't get his breath . . . the baby was cyanotic . . ." The mothers then took some form of precipitate action: "slapped him on the back . . . shake the baby very hard . . . I put my finger down his throat . . .", and the babies' reactions to such interventions are described as, " . . . a burp so hard I'm sure it would hurt an adult . . . at which time a large air bubble passed . . . burp the loudest most painful sounding burp I've ever heard from a baby . . . immediately he gagged . . ." In all cases the infants quickly revived: "She immediately started to cry and her color came back . . . she began breathing normally . . . He cried, and so did I."

(Continued on page 88)



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The point was made in our paper that such a cause of death (gas) would be difficult if not impossible to verify because following death and relaxation of the throat and its passages, the trapped air is released, leaving "no sign of the killer." It is consistent with the gastrointestinal theory, though we did not anticipate it, that only the SIDS "survivors" might be able to tell us what really happens.

Response to publication of our paper in *Michigan Medicine* was immediate. It continues unabated, and all of the signs indicate it will be *used* as an instrument for future work in seeking solutions to this problem.

The authors believe a time may come when SIDS will be changed to SID*A*, to more accurately represent the Sudden Infant Death *Accident*, and even the label will help assuage some of the grief and guilt suffered by the parents who experience these tragedies.

Most cordially yours,
Karl J. Kadlub, Ph.D.
K. Gregory Kadlub

P.S. If information in letters (more accurately *data*) thus far received from mothers has come unsolicited, there is a potential mine of information out there waiting for formal call. We ask that you place a request for mothers who have interrupted SIDS during the early stages of unfolding, to write and send us a brief description of the sequence of events.

Doctor Coury's Efforts Praised

To the editor,

On Friday, November 15th, John Coury, MD, representing Michigan State Medical Society, was on a panel on "Financing Health Care Services" for the freshmen medical students at Wayne University. I am writing to tell you that he did an excellent job.

The four hour program was arranged by Ted Goldberg, PhD, of Community Medicine at Wayne. It is well known that Dr. Goldberg's philosophy would support the Kennedy-Griffiths concept of national health insurance.

There were many heated questions to Dr. Coury and he calmly and coolly answered them.

George Mogill, MD, and I had been asked by Richard McAlpine, MD, of the newly formed Department of Family Medicine, to attend the session. We did not know who was to be on the panel and there was a great deal of fear that the presentation would be very one-sided.

(Continued on page 95)

IMPORTANT INFORMATION: *This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL* IS *NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.*

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.

Dosage and administration: ***Lomotil is contraindicated in children less than 2 years old.*** Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid,* 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

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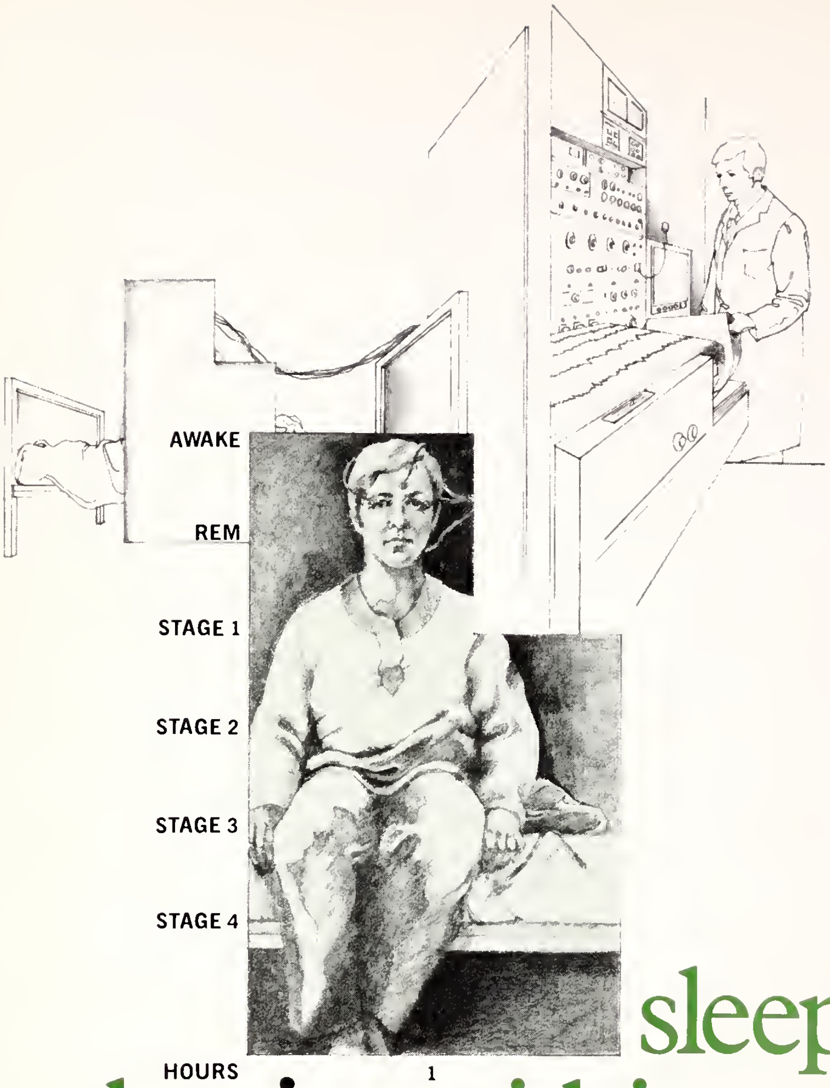

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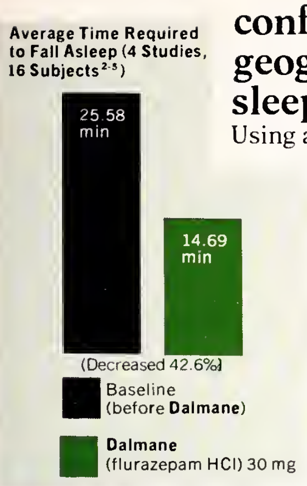

confirmed by clinical studies in four geographically separated sleep research laboratories[2-5]

Using a 14-night protocol involving eight insomniac and eight normal subjects, four studies confirmed the sleep-inducing effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule induced sleep within 17 minutes. In all these studies, Dalmane induced sleep rapidly, reduced nighttime awakenings, and provided 7 to 8 hours of sleep without repeating dosage[2-5]

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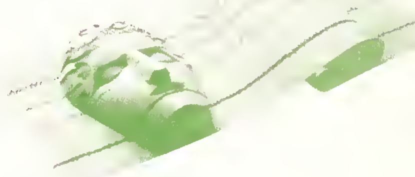
Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.
Contraindications: Known hypersensitivity to flurazepam HCl.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.
Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.
Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.
Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.
Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.



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Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently** — both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

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TO KEEP BLOOD PRESSURE DOWN AND KEEP POTASSIUM LEVELS UP

Patient Medication Profiles – their value to physician & pharmacist

By Eddie L. Boyd, Pharm. D, Ann Arbor
Brandt Rowles, PhD, Big Rapids

Introduction

A patient medication profile is to the pharmacist what the patient chart is to the physician. A patient medication profile should allow the pharmacist to readily retrieve a record of all medications any patient has taken over any period of time. A well designed profile system will contain the patient's name, address, telephone number, plus dosage and refill data on each medication, as well as non-prescription drugs, that the patient takes. The system further should list the patient's age, allergies, previous adverse drug reactions and any other factors that may affect medication therapy. The patient medication profile may be anything from a simple listing to a well kept system providing a professional service to both physician and patient.

Regardless of the information contained on a profile, the ultimate test of its value is how the pharmacist uses the system. Patient medication profile systems have been used too often only to provide patients a yearly income tax record of drug expenditures. They can also save much time and unnecessary telephone calls to physicians by pharmacists trying to track medications taken by patients losing their prescription numbers. However, the genuine measure of their worth must be their contribution to better patient care, as well as convenience.

Brown and Sommers[1] report that the percentage of pharmacies using patient profiles has increased from less than 10% in 1964 to more than 60% in 1972. One study[2] showed 86% of the patients surveyed stating that the pharmacist should offer a patient medication profile system.

Adverse drug reaction and interactions

How significant are drug interactions? Ten to 15 years ago, medications were used with little consideration of the possibility of drug interaction and there were few published papers. An outbreak of monoamine oxidase inhibitor drug interactions in England, resulting in several deaths, did much to stimulate interest in the subject. With interest came many publications, but too many were alarmist and poorly done. At the time when the large and confusing mass of information about drug interaction became available, some physicians and pharmacists obtained the misconception that because two drugs have the potential to interact, they should not be used together. However, most drugs that interact can be given together with slight alterations in dosage of one or both drugs without harm to the patient. Certain medication combinations are dangerous indeed, however, and should rarely be used together.

There remains much controversy over the occurrence and frequency of drug interactions. Miller[5] found that 4% of the patients entering a hospital in a given period were admitted due to adverse drug reactions, and 28% of all inpatients experienced an adverse drug reaction. Puckett and Visconti,[6] however, in a study of 2,400 patients in a small community hospital, found the incidence of clinically significant drug interactions to be a mere 0.12%. The significance of interactions, however, was determined by the prescribing physician instead of another physician or group of physicians.

While the incidence of drug interactions in the hospital might be difficult to quantitate, the incidence in the community is impossible to quantitate. There is indeed a difference between the hospital and community settings and the interactions seen within them. In the hospital, all medications administered to a patient are recorded on the chart and potential drug interactions readily are detectable. In the community setting, without patient medication profiles, there is no way to detect potential drug interactions even if the patient receives all of his medication from one pharmacy.

The classic drug interactions of the oral coumarin anticoagulants may be of no consequence in the hospital setting, where daily prothrombin times are taken and doses changed accordingly. What happens when the patient is discharged? Will he have his old prescription for phenobarbital refilled? Will he begin taking large doses of aspirin? Should the pharmacist assist in keeping the patient safe from himself? Would the several physicians that the patient might visit appreciate knowing what drugs that patient is receiving? If the answer to any of these questions is "Yes," there is indeed a need for pharmacists to maintain patient medication profiles and for physicians to recognize this beneficial service of the pharmacist. It is difficult to recognize drug interactions when the

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Doctor Boyd is assistant professor of pharmacy, College of Pharmacy, University of Michigan. Doctor Rowles is associate professor of pharmacy, School of Pharmacy, Ferris State College.

drugs that a patient is taking are not known to either the pharmacist or the physician.

What type of drug interactions occur most frequently? There are no data from which this question can be answered adequately. However, we have made certain observations from our own practice. We think unintentional drug interactions of significance occur rather infrequently, but when they do occur, they often are dangerous. We observe that most drug interactions are of the "duplication of medication" variety. Almost invariably in these cases, the patient is seeing more than one physician.

Patient medication profiles also should contain information about patient allergies.

These types of interactions are easy to prevent with properly utilized patient medication profiles. We have practiced in pharmacies where profiles have been used properly and unequivocally state our opinion that health care was benefitted.

Summary

In summary, patient profiles can benefit the patient, the pharmacist and the physician by:

1. Providing a tax and insurance record for the patient.

2. Guarding against interactions, especially when the patient is visiting more than one physician.

3. Guarding against the consumption of medications that could interact with a patient's allergies or disease state.

4. Providing a renewal record for the pharmacist when the patient loses or forgets his prescription number.

5. Providing a renewal record for the physician when he wants to renew a prescription and the patient's chart is not immediately available.

6. Providing a record of a patient's medications when information is needed in emergencies for poison control centers or hospital emergency rooms.

7. Moving the pharmacist one step closer toward a goal of better monitoring patients about the proper use and avoidance of certain nonprescription medications.

8. Providing third-party payment data.

9. Giving the pharmacist a record which he can use when answering physician's questions about medications which the particular patient may be taking.

The critics of patient medication profiles point out that patients may go to different pharmacies, thereby making the profiles worthless. The patient that patronizes more than one pharmacy assuredly will not receive the full benefits of the profiles. It does not follow, however, that the profile will not help other patients. In addition, sociologic research indicates that a clear majority of the population patronizes but one pharmacy.

If anywhere near 68.3% of the population uses but one pharmacy, the argument that not enough people can benefit from a patient medication profile system is a chimera.

Are pharmacists equipped with sufficient knowledge to currently use patient medication profiles? We definitely think so. Pharmacy students receive comprehensive courses in physiology, pharmacology, biopharmaceutics, drug interactions, and concepts in therapeutics. In recent years, colleges of pharmacy have placed great emphasis on correlating medication therapy with diseases, contraindications, adverse reactions, and clinical pharmacy practice. It is not uncommon to find recently graduated pharmacists who are frustrated by their inability to use their knowledge because the pharmacies where they practice do not maintain or properly use patient medication profiles.

A recommendation

Pharmacists who properly utilize medication profiles can assist the physician in providing better patient care. The service can provide information on all medications a patient takes and whether or not he tends to take them as prescribed.

We encourage physicians to insist that their patients utilize a pharmacy which maintains and properly utilizes patient medication profiles. The pharmacist who takes the time and makes the effort to do a good job with patient medication profiles should be trusted to have the patient's best interest at heart. He should be recognized and utilized. We are confident that the physicians who properly use pharmacists will have more time to practice medicine.

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Dr. Coury's presence balanced it beautifully. In fact it tipped the scales. Neither Dr. Mogill nor I found any need to even ask a question.

Cecelia F. Hissong, MD
President
Michigan Academy of Family Physicians

Polycythemia Vera Study Group

To the editor,

The Polycythemia Vera Study Group (PVSG) was organized seven years ago to better define the natural history of the disease, the optimal therapy and the influence of the various therapeutic modalities on the course of the disease, particularly in development of myeloid metaplasia, myelofibrosis and acute leukemia. 410 patients with polycythemia vera have already been entered into this randomized prospective study and are now being followed.

The PVSG has just instituted a major new protocol to study other myeloproliferative syndromes, exclusive of granulocytic leukemias. Previously untreated patients diagnosed as having agnogenic myeloid metaplasia, myelofibrosis or sclerosis, primary thrombocytosis, or unclassifiable myeloproliferative variants will be enrolled for study. The purposes of this are to learn as much as possible about the patho-physiology of these disorders and to perform randomized therapeutic trials to determine the most effective therapy.

Each patient will receive extensive diagnostic testing aimed at quantitating blood and bone marrow function and structure, relevant chemistries, cytogenetics levels of growth stimulators such as erythropoietin and colony stimulating activity, ferrokinetics, etc. Key observations will be repeated at regular intervals to look for common patterns of disease progression and to identify prognostic factors. Such comprehensive testing requires the combined efforts of many hematology centers. The therapeutic trials are designed to answer the following questions: 1) how frequently do androgens improve anemia?; 2) is there a difference in the remission rate of low or high dose androgens, and are oral androgens as useful as parenteral androgens?; 3) how does splenectomy compare to chemotherapy in treatment of patients having severe hemolytic manifestations and painfully enlarged spleens?; 4) what are the relative merits of p^{32} vs chemotherapy (1-phenylalanine mustard) in treatment of primary thrombocytosis?;5) how often do patients with MPS have co-existing iron or folate deficiency, and do they benefit from replacement?

There are 43 cooperating institutions in the U.S., France, Sweden and Israel. Further information can be provided by us or by the individual investigators. We welcome inquiries about entry and follow-up of potential study patients.

The investigating members in Michigan are:

Michigan State University
Hematology Group
℅ Earl W. Campbell, Jr., M.D.
B220 Life Sciences 1
East Lansing, Michigan 48824

After Court Ruling

Medical Practice Board Suspending MDs Not Meeting Standards

Early fears that courts might in effect strip the State Medical Practice Board of its disciplinary powers apparently have been allayed.

Last fall, the State Board suspended some physicians from practice for illegally prescribing drugs without first examining or taking medical histories of their patients. The physicians were charged by the board with violating the Controlled Substances Act and acting as suppliers of drugs.

The State Court of Appeals, however, reversed the suspensions, saying the physician has the legal right and is licensed to write prescriptions. Physicians doing so, even without examinations and interviews, have broken no laws, the court said.

Since that ruling in November, however, the Board has continued to suspend physicians. But now the suspensions are issued on the basis that prescribing drugs without examination and interview does not meet the minimum standards of medical practice described in the Michigan Medical Practice Act.

WMU Physician's Assistants Now at Work

Information obtained about 17 of the Western Michigan University Primary Physicians Assistants Program participants finds that 11 are employed in Michigan working for physicians, two others working in clinics and one for government. Three others are employed as physicians assistants in other states.

Eight of the 11 are employed in Michigan by physicians and one other works in a Michigan clinic.

One W.M.U. graduate is attending an Osteopathic College. No information was available about two other graduates.

Western graduated its first class of primary care Physicians Assistants in 1974.

A briefing session for physicians participating in the MSMS Speakers Bureau on Malpractice was held recently at MSMS headquarters. Led by Herb Auer, standing, manager, MSMS Department of Communications, the session helped prepare the MDs who would soon fan out across the state, to describe and explain MSMS positions in the current malpractice insurance crisis.

At 7 a.m. one morning, MSMS President Brooker L. Masters, MD, left, participated in another discussion of the malpractice insurance crisis with Detroit's WJBK-TV news personalities.

TV2
Eyewitness
NEWS
MORNING

Photo Gallery

Recent guests on the MSMS-sponsored monthly television question and answer show, "Housecall," were, from left, psychiatrist Kenneth E. Pitts, MD, West Bloomfield; internist Marjorie Peebles-Meyers, MD, Detroit, and family physician Kenneth J. Ray, MD, Grosse Ile. Their host was Ken Ford, WJBK-TV personality.

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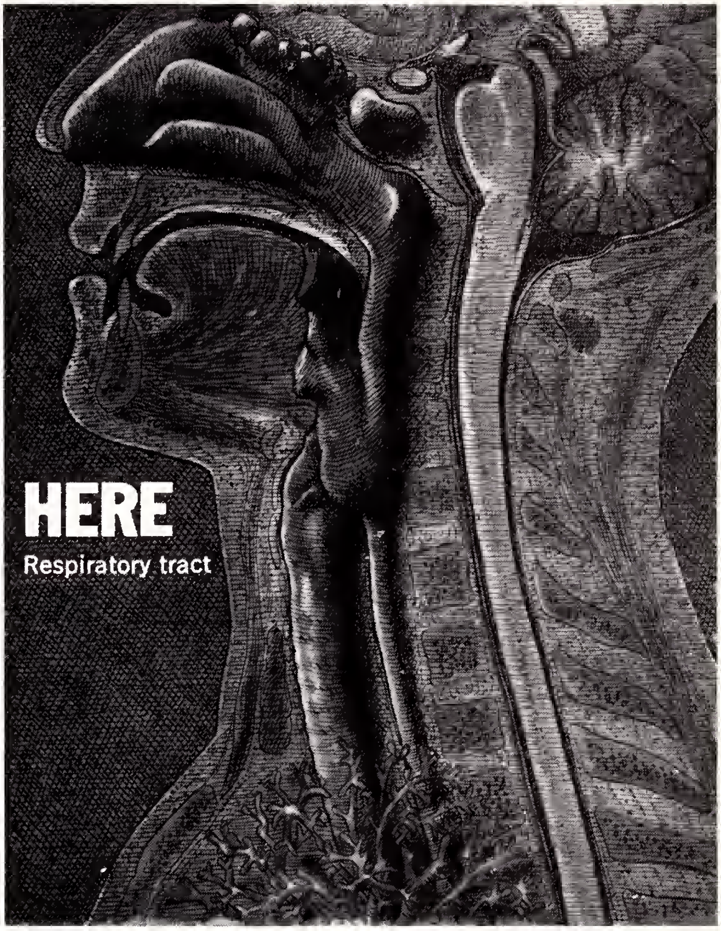

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Opinion & Dialogue

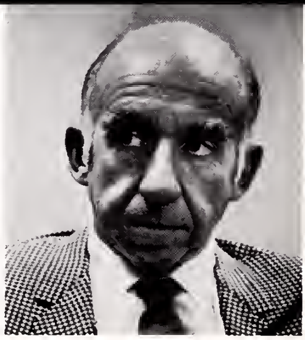
The Role of the Detail Man

Dr. Willard Gobbell
Family Physician
Encino, California

"I may be prejudiced, but I am very much in favor of the detail men I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.



Dr. Jeremiah Stamler
Chairman
Department of Community Health and Preventive Medicine, and Dingman Professor of Cardiology
Northwestern University Medical School

"In the total picture of dealing with health problems in this country, there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center, research people, and academic people have and that's in all likelihood on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent films produced by the pharmaceutical industry. When they function in this

Is He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

---

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.,* the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

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Keeping things in balance...*

Antivert®/25 Tablets
(25mg. meclizine HCl)

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children. Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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The post-T & A patient:
another type for TYLENOL® acetaminophen products

When the post-T & A patient requires an analgesic, a new problem arises. Hemorrhagic tendencies following the use of aspirin after tonsillectomies have been reported.[1,2] In a patient who "...has recently undergone a surgical procedure or has another underlying hemostatic defect, aspirin ingestion may cause significant bleeding.... Aspirin is absolutely contraindicated in such situations. Acetaminophen...could replace aspirin in these instances."[3]

The post-T & A patient is only one of several 'types for TYLENOL' antipyretic-analgesic products—that is, patients who should avoid aspirin. Considering *all* of them, wouldn't it provide added safety (as well as added convenience) to recommend TYLENOL products routinely for simple analgesia?

References: **1.** Reuter, S.H., and Montgomery, W.W.: Arch. Otolaryng. *80*:214-217 (Aug.) 1964. **2.** Osol, A., et al., ed.: The United States Dispensatory and Physicians' Pharmacology, ed. 26, Philadelphia, J.B. Lippincott Co., 1967, p. 171. **3.** Schwartz, A.D., and Pearson, H.A.: J. Pediat. *78*:558-560 (March) 1971.

Precautions and Adverse Reactions: If a rare sensitivity reaction occurs, the drug should be stopped. Acetaminophen has rarely been found to produce any side effects.

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Drops, 60 mg./0.6cc. (alcohol 7%).
Chewable Tablets, 120 mg.

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Commentary

Patients Need More of their Doctor

By Reuven Bar-Levav, MD
Detroit

What is wrong with medicine anyway?

Surely the patient nowadays receives more complete medical attention than he has ever received before. With the advances of scientific medicine, patients can be accurately and efficiently diagnosed and can receive specific treatment that helps overcome the process of illness. Not only polio and tuberculosis, but a host of other illnesses have practically disappeared in large segments of the world. People in general do not die of pneumonia anymore, except as a way of exit at old age. The late sequelae of syphilis, so prevalent in many mental institutions in the past, are practically no longer to be seen in societies where the standards of medicine are high and where preventive and curative measures are applied.

Nonetheless, the number of people going to physicians has not decreased. The complaints about the quality of medicine have increased by tremendous proportions, the prestige of the physician has fallen and continues to do so, and politicians and social reformers who want to get a great deal of mileage out of their proposals find it convenient to use the medical profession as their target.

Causes of Discontent

It might prove useful, both for the medical profession and for society at large, to first examine and then modify, if possible, the underlying causes that have created this somewhat strange situation.

The quality of life in the United States is directly influenced by the high degree of industrialization and professional super-specialization. Science, as it relates to the individual, is often computerized and complex, and so is medicine. The individual frequently exists in a state of impersonal detachment from others. Time and motion studies, which were early manifestations of this revolution in our industrial methods, were heralded at the time as true advances, maximizing man's efficiency and productivity. Few wondered then about the human cost of the fragmentation of the creative process of work. Amenities of pre-industrialized society such as small talk, time-consuming ceremonies of salutations, and other 'unnecessary' or 'wasteful' habits that allowed people to stop and chat with each other have practically disappeared from our culture.

Man's isolation is likewise reflected in our modes of transportation. We usually travel to work in single-occupant cars, hardly noticing those passing by in other vehicles. It would indeed be unusual and might even be regarded with suspicion if we addressed ourselves to a stranger on a bus or subway. We rush to our destinations and are, in fact, annoyed at the inconvenience of having to be with ourselves when traffic is delayed during so-called 'rush hours.' Instead of welcoming such an opportunity for self-reflection, it is common to have the radio turned on to a program that serves mostly the purpose of distracting the individual. A billboard in Detroit proclaims in huge letters: "Travel with a friend: Pick up Dick Purtan on WXYZ." All implications of the sad quality of such a one-sided ersatz 'friendship' are conveniently ignored. Beggars can't be choosers, and the lonely motorist, so hungry for friendship, apparently is willing to accept the statement as one of hope.

In many cultures it is understood that man needs time and opportunities for reflection and spontaneous human intercourse. In Hawaii, for instance, it is considered important to 'talk story," which means that one takes a little extra time when meeting another person, displaying some true interest in the other. The less rural and the more harassed Hawaiians become, the less they, too, seem to 'talk story,' and the more they fall prey to the timetables of their mechanized society. The making of a phone call to a friend or neighbor requires a deliberate act, a decision. The casual quality of the exchange that develops naturally is lost.

Yet humans continue to yearn and to be hungry for unhurried contact with their fellows. Since the nature of society has so radically changed, other substitutes have been found that at least partially satisfy this need. Cocktail parties and lounging in bars are both attempts in this direction. They are so popular because they provide opportunities to meet another person in a setting where the anxiety often resulting as one extends himself to a stranger is numbed by alcohol. Encounter groups, rock concerts, dinner parties, as well as such political activities as marching on Washington are ad-

(Continued on page 108)

Doctor Bar-Levav is a psychiatrist in private practice.

Must vasodilators and therapy for other diseases come into conflict?

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the compatible vasodilator... no treatment conflicts reported

The cerebral or peripheral vascular disease patient often has coexisting disease[1] which calls for another drug along with his vasodilator. It may be a hypoglycemic, miotic, antihypertensive, diuretic, anticoagulant, corticosteroid, or coronary vasodilator.

Vasodilan is not incompatible with any of these drugs—no treatment conflict has been reported. And, unlike other vasodilators, Vasodilan has not been reported to affect carbohydrate metabolism, liver function, or intraocular pressure—or to complicate treatment of diabetes, hypertension, peptic ulcer, glaucoma, or liver disease.

In fact, there are no known contraindications to the use of Vasodilan in recommended oral doses, other than that it should not be given in the presence of frank arterial bleeding or immediately postpartum.

[1] Gertler, M. M., et al.: Geriatrics *25*:134-148 (May) 1970.

Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows.

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Adverse Reactions: On rare occasions, oral administration of the drug has been associated in time with the occurrence of severe rash. When rash appears, the drug should be discontinued. Occasional overdosage effects such as transient palpitation or dizziness are usually controlled by reducing the dose.

Supplied: Tablets, 10 mg.—bottles of 100, 1000, 5000 and Unit Dose; 20 mg.—bottles of 100, 500 and Unit Dose.

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ditional manifestations of this need. We are seeking opportunities to be unhurriedly with others.

Medicine Losing Its Soul

Medicine, on the other hand, is being streamlined and becoming more efficient, more scientific and less humane. The science of medicine is being computerized. In the process of emphasizing its scientific aspects, the art of medicine is losing its soul.

The word 'medic' comes from 'mederi,' to heal, and the root 'med' relates to meditate or think. Modern scientific medicine everywhere, and especially in the United States, emphasizes the first derivative but fails to stress the second strongly enough. Both physicians and patients need to meditate more, take more time, and allow more opportunities for thinking and feeling. We really need to *do* less. Although specific pharmaceutical compounds are available and the art of surgery has been developed to a high degree of perfection, it nonetheless seems that the wrong medicine is dispensed much of the time. The patient is not getting what he really needs and wants. What is missing in the impersonal and harassed life of so many people is some unhurried time with a sympathetic, understanding and wise human being. This is often how the ideal physician is perceived by patients, and the failure to meet these expectations may well be the main reason why Medicine is being criticized so much.

In order to increase productivity and handle the pressures of heavy patient-loads, doctors often rush from one examining room to another, seeing patients who have been 'prepared' by nurses and aides. The patient's medical history is frequently checked off by non-medical assistants, weight and other measurements taken, blood drawn, E.K.G. and X-rays obtained — all before the patient is ever seen by the physician. Such aides are usually qualified to perform the tasks assigned to them, but they are hardly capable of addressing themselves to the listlessness, anxiety, and vague, but real, fears that patients commonly bring with them. In fact, these are sometimes even dismissed as interferences with the efficient and smooth operation of the practice. Patients usually wait for varying lengths of time, then spend more time in such 'preparations' before the doctor actually sees them. Such 'seeing' is often cursory and brief and the physician's attention is focused on the pathological part or system, rather than on the patient himself.

Such brief encounters with the physician, to whom the frightened patient often ascribes magical powers, are generally perceived as not enough. Overt or covert dissatisfaction results from the experience. The impression is left that nobody was there for the patient, that nobody really cared, that nobody really bothered to stop for even one brief and unhurried moment to see the patient as a whole being.

Such patients are unhappy and want more. They may only sense that something went wrong, not knowing exactly what it was. But they frequently support those who advocate basic changes in methods of health care delivery, not realizing that the new system might well be worse, not better, in the areas from which such dissatisfaction springs and from which it is fed.

Patients Need More of MD

Patients need and deserve more of the physician's undivided attention. They need and deserve not only competent handling of their illnesses, but also of the irrational, but real, fears that are connected with them. They want the meaning and rationale of procedures, tests, and results explained to them, briefly perhaps, but not hurriedly. Whether they can express it or not, they need and deserve most of all to be treated respectfully as individuals in distress.

Not only the patient will gain from such a change. The physician, too, may well rediscover that practicing in a less hurried manner will greatly increase the satisfactions he, himself, derives from his work, even if it slightly lowers his income. Medicine has always provided its practitioners with opportunities for making meaningful contacts with other human beings. It affords the doctor repeated chances to give of himself, a giving that enriches the giver as it helps the given. The restoration of such joy into the lives of physicians may well be a worthy reward in itself.

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ARNOLD H. KAMBLY, M.D.
Psychiatrist-Director

Medical Student Calls For Professional Unity

By Mark G. Campbell
Detroit

It seemed from the first day I was accepted to medical school, I found myself defending doctors and the medical profession. In some way everybody has a gripe with doctors and especially the association of doctors, the AMA.

They point out problems: health care inadequacy, cost containment, physician geographic distribution, physician specialty distribution, personalization. It goes on and on. People seem to blame most of their present medical frustrations on the association of doctors.

I'm proud and thankful to have been able to go to medical school. Now I am "one of them." I am responsible, at least in my small way, for the system. It's a great challenge.

Some students have asked why they should become involved in the AMA. "The AMA is for 'ol conservatives, who have a history of fighting against many social programs designed to help people."

My answer is not to drop out with apathy and inactivity but rather to involve themselves and others so that united we can attempt to find the most workable system.

Can this be a one sided venture? No. If increased involvement of the younger or those already alienated or inactive is to take place, then there must also be a change in the power structure. This should be granted freely by the more experienced leaders, to allow meaningful input and change to filter into the organization.

What the AMA has stood for in the past is history. The present system (or non-system) of health care is our concern. The important thing is what we do in the future. When young it is easy to become carried away with desired goals; and as one gets older it is easy to become frustrated at our lack of achievement.

The great mistake would be to abandon our goals and the organization itself. The problem of a health care system will not go away. We would only leave the work to others, perhaps less informed or qualified; certainly a lesser force with a narrower point of view.

Problems are not solved well by the apathetic, the uninvolved or outside complainers. Likewise,

---

Mr. Campbell is a Senior, Wayne State University School of Medicine, and president, Wayne Chapter, Student American Medical Association, 1973-74.

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problems are not really solved by a small group, the political powerful elite, whose short-range goal is the protection of their small interest rather than the long-range goal of harmony within the profession or the working of an equitable health care system.

I believe the AMA must be the mechanism through which every physician can work toward a system of health care. A system must not be imposed on physicians. Yet also we must not neglect our duty so that legislators are left no recourse but to make laws about our practice. Continued legislation will be needed if we continue to shirk our responsibility in dealing with present medical problems.

It is time for a re-affirmation of unity and purpose. The younger and older, the specialist and generalist, the rural and urban doctor must be partners in a common cause. United we can work for high standards within the profession and to provide expert care for the people we serve.

The AMA may have been wrong in the past, but it must be right in the future!

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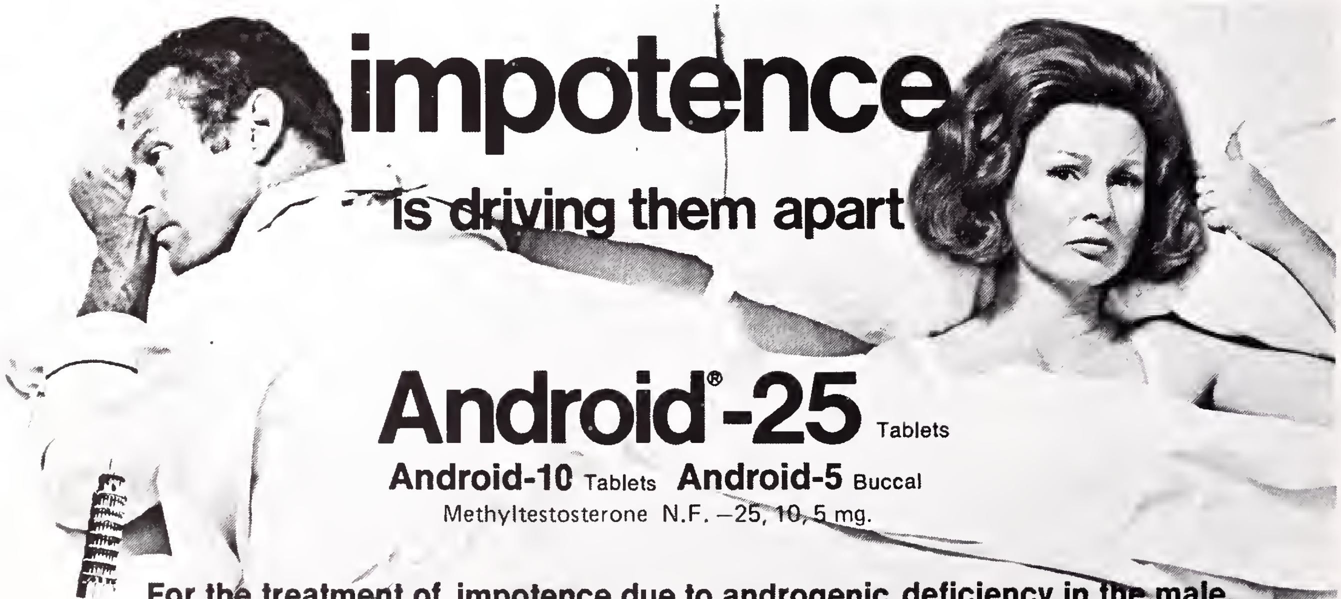
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DESCRIPTION: Methyltestosterone is 17β-Hydroxy-17-Methylandrost-4-en-3-one. **ACTIONS:** Methyltestosterone is an oil soluble androgenic hormone. **INDICATIONS:** In the male: 1. Eunuchoidism and eunichism. 2. Male climacteric symptoms when these are secondary to androgen deficiency. 3. Impotence due to androgenic deficiency. 4. Postpuberal cryptorchidism with evidence of hypogonadism. Cholestatic hepatitis with jaundice and altered liver function tests, such as increased BSP retention and rises in SGOT levels, have been reported after Methyltestosterone. These changes appear to be related to dosage of the drug. Therefore, in the presence of any changes in liver function tests, drug should be discontinued. **PRECAUTIONS:** Prolonged dosage of androgen may result in sodium and fluid retention. This may present a problem, especially in patients with compromised cardiac reserve or renal disease. In treating males for symptoms of climacteric, avoid stimulation to the point of increasing the nervous, mental, and physical activities beyond the patient's cardiovascular capacity. **CONTRAINDICATIONS:** Contraindicated in persons with known or suspected carcinoma of the prostate and in carcinoma of the male breast. Contraindicated in the presence of severe liver damage. **WARNINGS:** If priapism or other signs of excessive sexual stimulation develop, discontinue therapy. In the male, prolonged administration or excessive dosage may cause inhibition of testicular function, with resultant oligospermia and decrease in ejaculatory volume. Use cautiously in young boys to avoid premature epiphyseal closure or precocious sexual development. Hypersensitivity and gynecomastia may occur rarely. PBI may be decreased in patients taking androgens. Hypercalcemia may occur, particularly during therapy for metastatic breast carcinoma. If this occurs, the drug should be discontinued. **ADVERSE REACTIONS:** Cholestatic jaundice • Oligospermia and decreased ejaculatory volume • Hypercalcemia particularly in patients with metastatic breast carcinoma. This usually indicates progression of bone metastases • Sodium and water retention • Priapism • Virilization in female patients • Hypersensitivity and gynecomastia. **DOSAGE AND ADMINISTRATION:** Dosage must be strictly individualized, as patients vary widely in requirements. Daily requirements are best administered in divided doses. The following is suggested as an average daily dosage guide. **In the male:** Eunuchoidism and eunuchism, 10 to 40 mg.; Male climacteric symptoms and impotence due to androgen deficiency, 10 to 40 mg.; Postpuberal cryptorchism, 30 mg. **HOW SUPPLIED:** 5, 10, 25 mg. in bottles of 60, 250.

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Integrating Ethics into the Medical Curriculum: One School's Progress Report

By Howard Brody, William B. Weil, Jr., MD, Bruce L. Miller, PhD, and James E. Trosko, PhD
East Lansing

Introduction

More and more medical educators are ready to acknowledge that the teaching of medical ethics ought to have a significant place within the medical school curriculum.[1] Like any other subject, medical ethics can be taught in isolated courses or can be integrated into the curriculum as a whole. In the first portion of this paper, we will describe the importance of integrating medical ethics into the curriculum, and mention some general principles for doing so. In the second portion, we shall describe the evolving ethics program at the Michigan State University College of Human Medicine *(MSU-CHM)*, to illustrate how one attempt has been made to put these principles into practice.

Integrating Medical Ethics

Medical ethics is not a branch of medicine; it is a branch of ethics, which in turn is a subdiscipline of philosophy.* Since philosophy has not traditionally been taught as an essential part of medical education, the task of integrating this "foreign" subject matter into the curriculum would seem to present some unique problems.

Specific formats for presenting ethics to medical students — including specific courses in ethics, lecture series, discussion seminars, weekend retreats, and hospital-based "ethics rounds" — have been described in detail elsewhere.[1-4] It is tempting to conclude that a school need only decide what constitutes an "expert" in medical ethics, hire an instructor with these credentials and allot a certain number of curriculum hours in which he may use some or all of these formats. If "integration" is to take place, it is assumed that it will occur in the minds of the students, so long as the instructor is sufficiently skilled.

However, curriculum planners must remember that the role of the formal curriculum in determining the product of medical education may be very small, compared to two other contributing factors: the student's experience prior to entering medical school and what has been called the "latent curriculum" which takes place both inside and outside the classroom and teaching ward.

Very likely, the student's prior experience has included a heavy dose of study in the natural sciences, preparing him to view medicine as an applied science. The student emerging from this background is likely to be less receptive to disciplines that he has been taught to regard as "soft," which are not susceptible to quantification and which require explicit value judgments. When a heavy burden of "hard science" studies begin to demand his time and attention, this student will tend to devote most of his energies to these and to relegate any course in ethics to a low priority. This will be the case especially where the student is aware of having made ethical decisions throughout his life; he will see little need to take a course in something he thinks he already knows.

'Latent Curriculum'

Thus the first of the two factors tends to make assimilation and integration of medical ethics more difficult for the student. The second factor, the "latent curriculum," can work either to reinforce or to overcome the first factor of prior experience. An important part of the "latent curriculum" is the set of unintentional messages that the student reads out of the attitudes of the faculty and the organization of the formal curriculum. For instance, the professor of public health may state in lecture that his discipline is a keystone of medical practice. If the student observes that his anatomy course is 120 hours long while the public health lectures take up 10 hours, he will tend to believe the unspoken message of the curriculum organization rather than the spoken message of the professor.

If medical ethics teaching is haphazardly grafted on to the existing curriculum, with an eye only for the handiest block of free time, the

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*Throughout this paper "medical ethics" is used in a sense which must be distinguished from what we prefer to call "professional etiquette." Medical ethics deals with larger questions of the doctor's responsibilities to his patient and to the whole society, while professional etiquette (such as the "codes of ethics" of medical societies) emphasizes the intraprofessional relationships among physicians.

Mr. Brody is a student in the College of Human Medicine and the Department of Philosophy; Doctor Weil is professor and chairman and Doctor Trosko is associate professor in the Department of Human Development, and Doctor Miller is assistant professor in the Department of Philosophy, Michigan State University.

Doctor Trosko is the recipient of a Public Health Service Career Development Award.

resulting unspoken messages may work against the actual content of the ethics course. If the student finds the structure, teaching format or mode of evaluation of the ethics course at significant variance from his basic science courses, he is likely to conclude that the course content is of questionable relevance to medical practice. This feeling will be fed by the student's natural insecurity over whether he is learning enough factual data to become a good clinician; and the feeling will be further reinforced if the student goes into the clinical phase of his training to find his instuctors mostly uninterested in the ethical facets of their decisions.

Either of these two factors, prior experience or the "latent curriculum," can be altered to give more support to the teaching of medical ethics. If we assume that the attributes used as criteria for admission to medical school will not easily be altered to favor more "ethically prone" individuals, the next best move is to attack the "latent curriculum" in order to weed out the dissonant messages. A good first step toward emphasizing the importance of ethical decision-making is to structure the ethics teaching throughout the four years of medical school. A useful model to guide this structuring is the concept of the "spiral curriculum," in which the student returns to a topic several times during his medical education, each time at a slightly higher level of sophistication.[5] Integration then depends upon matching the content of each portion of the ethics program to the content being dealt with in other courses at that point. For instance, in a school that adheres rigidly to the two-years-science-two-years-clinical model, ethics discussion in the first two years might emphasize questions arising out of the applications of new science and technology to medical practice, such as behavior control and genetic engineering. Topics such as the nature of informed consent might be reserved for later, when the student is actually in contact with patients.

Continuity Needed

Once the overall goal of continuity of input has been addressed, other problems of messages in the "latent curriculum" can be attacked in part by judicious selection of format. For example, it might not be wise, at least at the beginning, to grade an ethics course on a pass-fail basis if other courses have letter grades assigned. A seminar format might be contraindicated if all other teaching in that school is done in large lectures. So long as the actual content of the ethics course is not placed in jeopardy, such format selection may help reinforce the intended integration. *(Purists will argue that the format of a course must always follow logically from the content. However, the fact that many different formats are being used across the country to teach medical ethics suggests that wide latitude is possible.)*

It follows that a program in ethics suitable for one medical school may be very inadequate for another. The description of the unfolding ethics program at MSU-CHM should be read with this in mind. Our experiences at MSU-CHM should serve as an illustration of how the preceding principles might be applied in a specific instance, rather than as a model to be emulated directly.

The MSU-CHM Program

In 1972, the formal program in medical ethics at MSU-CHM was limited to a seminar for faculty members, taught once in a set of evening sessions. Since then, interested faculty and students have moved to implement more comprehensive and structured ethics teaching. This has been done through modifications within existing courses and programs, and all offerings have been elective rather than required for students. Although the MSU-CHM administration has shown consistent support for these developments, it has not yet been necessary to approach the College with formal requests for additional teaching hours or budget.

In planning a structured ethics input, several features of the MSU-CHM curriculum philosophy were kept in mind. The most significant were:

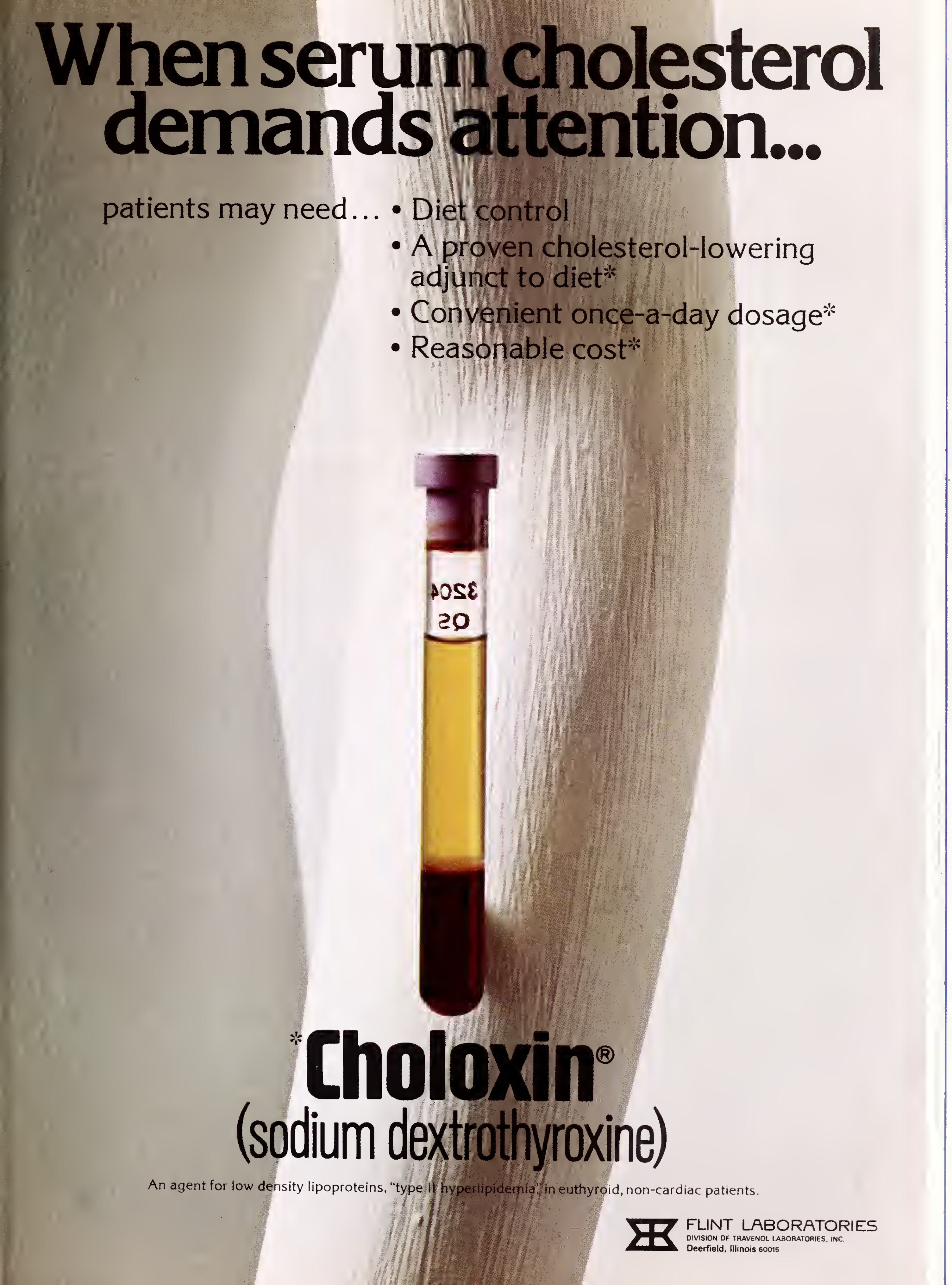
1. The demand for written instructional objectives for all courses, with the objectives determining the mode of evaluation of student performance.
2. Provision, wherever possible, of alternative means by which the student may meet required objectives.
3. The use, wherever possible, of the actual setting in which the knowledge is later to be applied.

The third objective requires early and continued clinical exposure for the student. Where the clinical setting is impractical, an alternative is the focal problem teaching method *(as opposed to the discipline-centered or organ-system-centered approach),* which emphasizes use of acquired basic-science knowledge in clinical problem-solving situations by means of paper case discussions.[6]

To achieve these goals, the basic science departments at MSU-CHM have been requested to seek ways to decrease the number of hours devoted to their departmental courses, in order to increase their input into clinically integrated teaching such as focal problems. Within this atmosphere, it would have been highly inconsistent to attempt the creation of a discipline-oriented course in medical ethics; so the decision was made early to attempt to teach medical ethics within the framework of existing courses.

In the fall of 1972, MSU-CHM officially ended a period of curriculum development with implementation of a three-phase curriculum. It has now been

(Continued on page 115)



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Description

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The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

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Indications

This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease.

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication.

Before prescribing, note the following: Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively in patients with significant myocardial impairment. CHOLOXIN dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications

The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease, including angina pectoris; history of myocardial infarction; cardiac arrhythmia or tachycardia, either active or in patients with demonstrated propensity for arrhythmias; rheumatic heart disease; history of congestive heart failure; and decompensated or borderline compensated cardiac status.
2. Hypertensive states (other than mild, labile systolic hypertension).
3. Advanced liver or kidney disease.
4. Pregnancy.
5. Nursing mothers.
6. History of iodism.

Warnings

CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care. Special consideration of the dosage schedule of CHOLOXIN is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels. Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN. As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients, and in surgery in hypothyroid patients in whom it may be advisable to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who had required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age

Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug; it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions

It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly, they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHOLOXIN for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions

The side effects attributed to dextrothyroxine therapy are, for the most part, due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient, although its relationship to CHOLOXIN therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN; a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration

For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN is approximately 0.1 mg per kilogram. The initial daily dosage should be approximately 0.05 mg per kilogram to be increased in up to 0.05 mg per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

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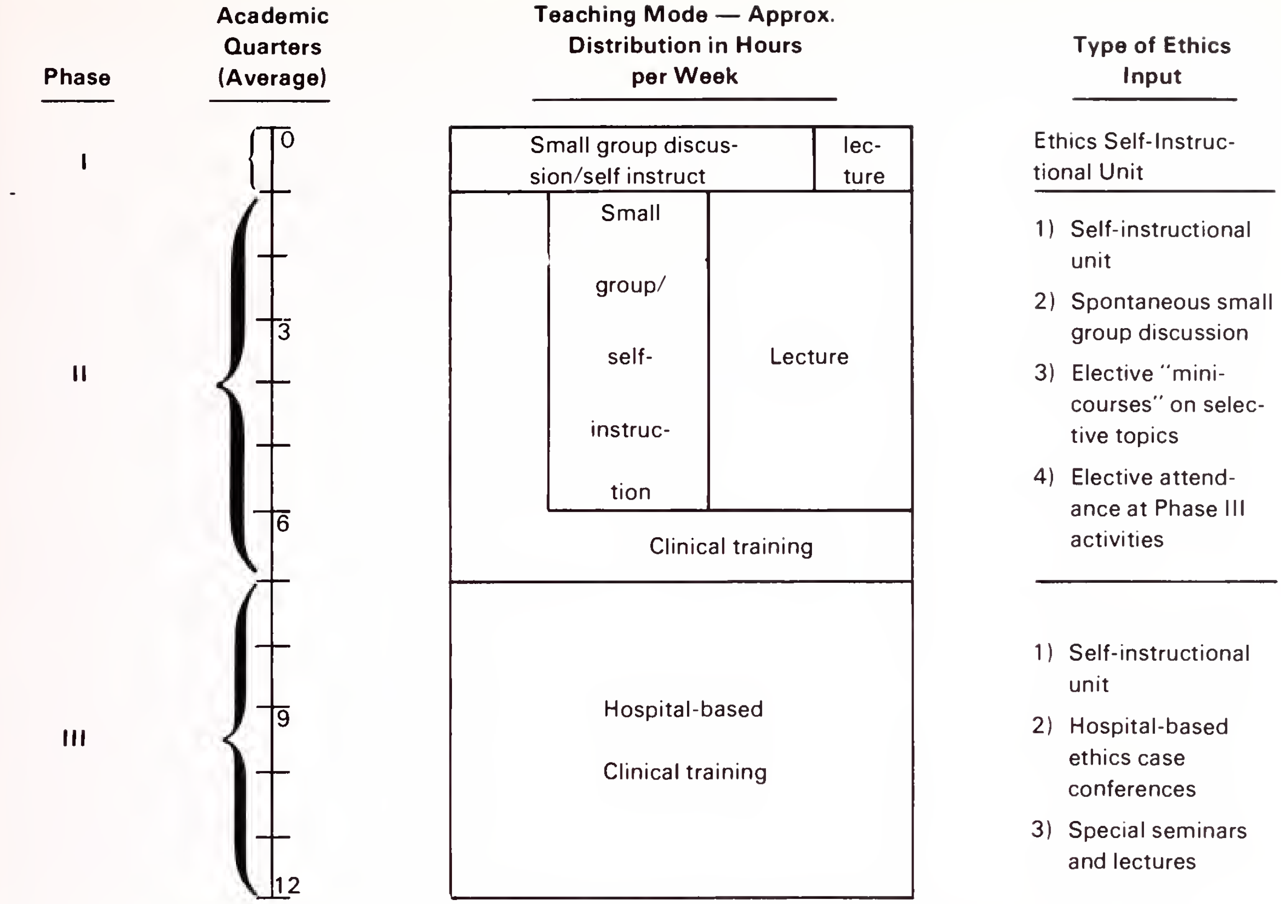
Phase
Academic Quarters (Average)
Teaching Mode — Approx. Distribution in Hours per Week
Type of Ethics Input
I
II
III
0
3
6
9
12
Small group discussion/self instruct
lecture
Small group/self-instruction
Lecture
Clinical training
Hospital-based Clinical training
Ethics Self-Instructional Unit
1) Self-instructional unit
2) Spontaneous small group discussion
3) Elective "mini-courses" on selective topics
4) Elective attendance at Phase III activities
1) Self-instructional unit
2) Hospital-based ethics case conferences
3) Special seminars and lectures

Figure 1. MSU-CHM Three-Phase Curriculum with type of ethics teaching suggested for each phase.

possible to structure a suitable form of ethics input for each of the three phases, as outlined in Figure 1.

Phase I. Entitled "Introduction to Medicine," the first academic quarter at MSU-CHM is devoted to problem-solving method as a way to organize the basic science data that will be learned then and later. Instruction is primarily in small-group discussions, aided by self-instructional materials for out-of-class study. Some time is also devoted to didactic lectures. An important part of Phase I is the first term of the course in Doctor-Patient Relationship.

Small-group discussion of paper clinical cases is a flexible and useful format in which spontaneous discussion of ethical issues can occur. However, it has been observed that in the absence of structure and direction, many potential ethical questions are skipped over; and when a question is taken up, the discussion may remain at the stage of exchanging personal biases and never progress toward the selection of a rationally acceptable course of action. On the other hand, too much structure and direction robs the small-group discussion format of much of its utility.

These problems have been addressed by developing a self-instructional unit in medical ethics which students may study out of class at their own rates. Since textbooks of ethics tend largely to ignore the peculiar features of the medical context and books on medical ethics tend to be merely collections of essays, it was decided to produce a self-instructional book especially for use at MSU-CHM. This book emphasizes ethics as a decision-making method, and provides 56 sample cases, arranged by topic, with which the student may practice his ethical problem-solving skills.[7]

Phase II. The next six academic quarters are devoted to the acquisition of basic science knowledge through both focal problems and lectures, with some time being devoted to history-taking and physical examination in clinical settings. Compared to Phase I, Phase II represents a greater amount of time spent in didactic teaching, although it is now possible for a minority of students to elect to complete Phase II strictly on a focal-problem "track."

It is assumed that students will carry their Phase I experience, including exposure to the ethics self-instructional unit, over into Phase II, so that this earlier exposure will continue to give rise to, and direct the focus of, spontaneous small-group discussion within the focal problem format. In addition, more structured types of ethics input have been made available through elective "minicourses" offered by the Department of Human Development. These generally last one quarter and meet one hour per week. A seminar course, "Ethical Problems in Medical Decision-Making," taught by three of the authors *(W.B.W., H.B., B.L.M.)*, preceded the compilation of the self-instructional unit; but its continuance is planned especially for those students who prefer to learn through more formal student-faculty contact. Another minicourse in "Bioethics" *(offered by J.E.T.)* explored in greater depth the long-range biological and social implications of contemporary problems. Other minicourses could be offered in specific ethical areas *(reproduction, euthanasia, etc.)* as supplements to the self-instructional unit.

Phase II students also have the option, as time permits, of attending sessions aimed at Phase III students in the Lansing Community.

Phase III. Phase II concludes with a quarter of hospital-based instruction entitled "Fundamentals of Patient Care," in which skills in history-taking and physical examination are solidified. The remaining 60 weeks comprise Phase III and consist of clinical clerkships in the specialty and subspecialty areas. For "Fundamentals of Patient Care" and Phase III, students are divided into groups studying in community hospitals in Lansing, Grand Rapids, Flint, Saginaw and, beginning fall 1974, Kalamazoo.

To date, formal ethics teaching in Phase III has been initiated only in Lansing. The format adopted is that of a monthly medical ethics case conference, patterned after the "ethics rounds" at Columbia[2] and at Harvard.[8] Students, house staff, nurses and community physicians are invited to suggest cases which present ethical dilemmas, to be discussed at noon conferences at Lansing's St. Lawrence Hospital by panels including a medical professional, a philosopher-ethicist *(B.L.M.)*, a clergyman and/or an attorney. Topics that have been considered thus far include:

1. How to approach the family of a patient in "brain death" with a request to discontinue the respirator.
2. What to tell the patient or family when a therapeutic error has been committed with serious consequences to the patient *(such as incorrect medication or dosage)*.
3. How to settle a disagreement among members of the health care team concerning proper therapy for the patient.
4. How the psychiatrist should approach a suicidal patient with an apparently rational reason for suicide.
5. Whether a neonate with obvious gross malformations should be resuscitated or allowed to die.

In addition to these regular conferences, students of all three curricular phases in Lansing may attend occasional guest lectures at the medical school on ethics topics. Speakers in 1974 included Charles U. Lowe, MD, who was involved in the preparation of the proposed Federal guidelines for human experimentation, and Chester R. Burns, MD, historian of medicine and medical ethics. Series of lectures are also given by June Goodfield, PhD, visiting professor of Human Medicine and Philosophy.

Plans for the Future. MSU-CHM can expand the program in many obvious ways. Other kinds of program development, which attempt to address some significant issues currently being neglected in medical ethics teaching generally, are more difficult.[9]

The number of lecture-seminar options offered to Phase I and II students can be expanded. Case conferences or similar programs can be initiated for Phase III students in Grand Rapids, Flint, Saginaw and Kalamazoo. *(It is worth noting that each of these communities has a college or university from which "experts" in philosophy, religion, etc. could possibly be recruited for discussion panels.)*

Experience may also demonstrate in the near future that the medical ethics self-instructional unit is not in itself sufficient to stimulate optimal discussion of ethical issues in focal problems. It would then be logical to look over the specific objectives for each focal problem and to outline for the benefit of faculty and students the potential ethical issues that each suggests. For instance, the focal problem on "Sore Throat" presently makes mention of the value of community streptococcus detection programs in preventing rheumatic fever. Focal-problem faculty could be alerted that this may be a good opportunity to bring up the ethical issues involved in involuntary mass health screening programs, and a comparison might be made with problems of sickle-cell anemia screening.

Of the more difficult problems still to be wrestled with, possibly the most immediate for MSU-CHM is the development of instructional objectives and evaluation procedures for medical ethics.[9] Failure to develop these threatens to further the idea of the "irrelevance" of ethics teaching, so long as objectives are specified for all other MSU-CHM courses. However, we have not yet designed any set of objectives which are both specific in terms of the behavior required to demonstrate competence and general in the sense that a student is not forced by them to adopt someone else's personal values. This issue ought to be addressed with some feeling of urgency.

Role of Humanities

One cannot specify instructional objectives unless one can define the behavior that is expected of the student upon completion of his medical education. Thus, thoughtful consideration of the goals of teaching medical ethics leads directly to a discussion of what sorts of human beings one wishes to see practicing medicine in the future — and the question arises of the appropriate role of the humanities and liberal arts within the medical setting. While we cannot pass judgment on the strengths and weaknesses of medical humanities programs initiated by other schools,[10] it seems clear that the need for integration is especially strong here. While medical ethics teaching may be seen as the development of problem-solving competence and thus can be dealt with inside the clinical framework, the search for the broader philosophical foundation upon which to base this problem-solving may demand a very different approach.

At the very least, however, medical ethics teaching should aim at revealing the existing gaps in our philosophical foundations, and it should provide the arena within which any new philosophical developments can be put to the practical test. As Drane has suggested, a scientific analysis of human nature should be the subject of educational scrutiny, for "every ethic is founded in a philosophy of man and every philosophy of man points toward ethical behavior."[11]

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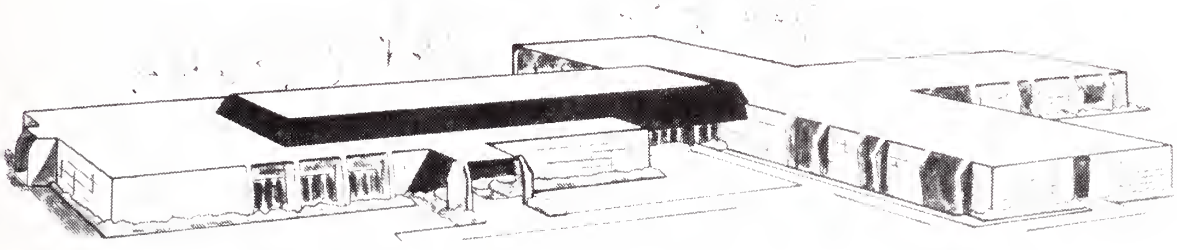

Charles L. Callaway MD, Medical Director

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In Memoriam

James E. Caraway, MD
Franklin, NC

Retired Michigan physician James E. Caraway, MD, died Dec. 23 at the age of 75. He was a graduate of the University of Michigan Medical School and was in practice 36 years. He was affiliated with Annapolis Hospital, Wayne, and Beyer Memorial Hospital, until his retirement in 1963. He had been residing in Franklin, NC.

Charles E. Darling, MD
Detroit

Charles E. Darling, MD, Detroit, who was to have been installed this month as president of the Wayne County Medical Society, died Dec. 26 at the age of 57. Doctor Darling had practiced obstetrics-gynecology for 25 years and was on the staffs of Northwest Grace and Receiving Hospitals of Detroit General hospitals.

Doctor Darling was a clinical instructor with Wayne State University School of Medicine, from which he was graduated. He was a fellow of the American College of Surgeons, American and Michigan Societies of Obstetrics and Gynecology and the Detroit Academy of Surgery. He was the son of the late Milton A. Darling, MD, cancer specialist, gynecologist and former WCMS president.

E. Bruce Foster, MD
Southfield

An obstetrician-gynecologist for 40 years, E. Bruce Foster, MD, Southfield, died Dec. 28 at the age of 66. Doctor Foster was former chief of staff at Providence Hospital, Southfield, and past president of the Michigan Society of Obstetrics and Gynecology. He was a graduate of the University of Western Ontario medical school.

William T. Greenlee, MD
Detroit

Detroit physician William T. Greenlee, MD, died recently at the age of 80.

William H. Kelly, MD
Lansing

Former medical superintendent of the Ionia State Hospital, William H. Kelly, MD, died Jan. 11 at the age of 64. Doctor Kelly had served more than 20 years with Michigan mental health agencies before retiring in 1974. He was a graduate of Marquette University and a diplomate of the American Board of Psychiatry and Neurology. He was a past president of the Michigan Society of Neurology and Psychiatry. He was former director of Community Psychiatric Services for the Michigan Department of Mental Health.

Eugene Laurisin, MD
Royal Oak

Detroit-area proctologist Eugene Laurisin, MD, died Nov. 30 at the age of 82. Doctor Laurisin was graduated from the University of Budapest medical school and had been affiliated with Brent General and Plymouth General hospitals. He was a diplomate of the International Academy of Proctology, and life member of the Wayne County and Michigan State Medical societies.

Rachel McClelland, MD
Livonia

Rachel Lucille McClelland, MD, Livonia, died Dec. 12 at the age of 55. Doctor McClelland, a pediatrician, was on the staffs of Children's and Sinai Hospitals of Detroit. She also was a staff member of the Wayne County medical examiner's office for 21 years and the Wayne Probate Court Juvenile Division. She was a graduate of Wayne State University School of Medicine.

R. W. Streat, MD
Davison Township

Rudolph Webber Streat, MD, Flint-area physician for more than 50 years, died Jan. 1 at the age of 83. Doctor Streat, an otorhinolaryngologist, was a graduate of the University of Michigan Medical School. He was affiliated with Hurley, St. Joseph and McLaren General hospitals in Flint. He served two terms on the Genesee County Board of Supervisors and two terms as county coroner. He was a member of the Flint Academy of Surgery and the Michigan Triological Society.

Milton D. Vokes, MD
Detroit

Detroit obstetrician-gynecologist for more than 50 years, Milton Donald Vokes, MD, died Dec. 16 at the age of 82. He was a graduate of the Detroit Medical College and also a pharmacist. He was an assistant surgeon with the U.S. Navy during World War I and a regimental surgeon with Michigan troops during World War II. He served 27 years with the U.S. Selective Service board.

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MEETINGS

Feb. 12–Obstetrical and Gynecological Medical Symposium, sponsored by Lansing Ob-Gyn Society, Michigan Society of Ob-Gyns, E. W. Sparrow Hospital, MSU College of Human Medicine and Continuing Education Service, at Kellogg Center, East Lansing, contact: Thomas Kirschbaum, MD, 178 Giltner Hall, MSU, East Lansing 48824.

Feb. 13–Continuing Education Conference for pathologists, Towsley Center, University of Michigan Medical Center.*

Feb. 18-20–Postgraduate course in EKG diagnosis, U-M Medical Center, Ann Arbor.*

Feb. 25-28–Postgraduate course in emergency medicine, U-M Medical Center, Ann Arbor.*

March 5-6–Postgraduate course in advances in pediatrics, U-M Medical Center, Ann Arbor.*

March 6–Michigan Psychiatric Society meeting, "Mental Health Statutes — Where Are We Now?" Michigan Inn, Southfield, contact: Sidney Bolter, MD, chairman, Providence Hospital, Southfield 48075.

March 10-11–Postgraduate course on surgical complications, U-M Medical Center, Ann Arbor.*

March 12–The Council, MSMS headquarters, contact: Warren F. Tryloff, director.

March 14-15–Tenth Annual Michigan Conference on the Medical Aspects of Organized Athletics, in conjunction with Great Lakes Athletic Trainers Association annual meeting, Ann Arbor Inn, contact: Helen Schulte, MSMS headquarters.

March 18-20–Postgraduate course in morphology of the blood and marrow, U-M Medical Center, Ann Arbor.*

March 26-27–1975 Annual Michigan Conference on Maternal and Perinatal Health, Civic Auditorium and Pantlind Hotel, Grand Rapids, contact: Helen Schulte, MSMS headquarters.

March 31-April 2–Ob-Gyn Conference, U-M Medical Center, Ann Arbor.*

April 7-May 2–Surgical Anatomy Review, U-M Medical Center, Ann Arbor.*

April 10–Continuing Pathology Conference, U-M Medical Center, Ann Arbor.*

April 16–Orthopedics in Family Practice, U-M Medical Center, Ann Arbor.*

April 17–Spring Meeting, Michigan Psychiatric Society, honoring Jacques S. Gottlieb, MD, at Holiday Inn West, Ann Arbor, contact: Dean P. Carron, MD, 425 E. Washington St., Ann Arbor 48108.

April 17-18–Course on medical technology/hematology, U-M Medical Center, Ann Arbor.*

April 21-25–American College of Physicians postgraduate course on recent progress in clinical endocrinology, co-sponsored by U-M Medical Center, at Towsley Center, Ann Arbor, contact: ACP, 4200 Pine St., Philadelphia 19104.

April 24-25–International conference on andrology, "The Human Semen and Fertility Regulation in the Male," at WSU School of Medicine, contact: E. S. E. Hafez, PhD, WSU School of Medicine, 550 E. Canfield, Detroit 48201.

April 24-26–Meeting of the Midwestern Association of Plastic Surgeons, Shiawassee Hotel, Southfield, contact: Burns Newby, MD, 20905 Greenfield, Southfield 48075.

April 28–Continuing Pathology Conference, U-M Medical Center, Ann Arbor.*

April 28-29–Human Sexuality Workshops, U-M Medical Center, Ann Arbor.*

May 1-2–Ophthalmology Conference, U-M Medical Center, Ann Arbor.*

May 4–The Council, Michigan Inn, Southfield, contact: Warren F. Tryloff, director.

May 4-6–MSMS House of Delegates, Michigan Inn, Southfield, contact: Richard Campau, MSMS headquarters.

May 13-14–Postgraduate course in treatment and drug therapy, U-M Medical Center, Ann Arbor.*

May 21-23–Michigan Public Health Association Annual Meeting, Pantlind Hotel, Grand Rapids, contact: Barbara Clark, Program Chairman, 1800 Kales Building, 76 W. Adams, Detroit 48214.

May 28–Seminar on Medicine and Law (Malpractice), Institute for Continuing Legal Education, U-M Medical Center, Ann Arbor.*

June 3-6–Postgraduate course in advances in internal medicine, U-M Medical Center, Ann Arbor.*

June 3-5–Annual Meeting, Michigan Chapter, American Academy of Pediatrics, Bay Valley Inn, contact: Charles M. Coffman, executive secretary, 4791 Haddington Drive, Bloomfield Hills 48013.

June 11–The Council, MSMS headquarters, contact: Warren F. Tryloff, director.

June 15-19–AMA Annual Convention, Atlantic City.

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

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Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.

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Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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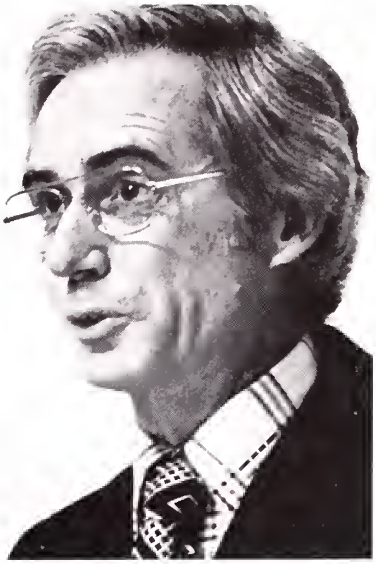
President's Page

Here Are MSMS Goals in Malpractice Crisis



This message will tell you in another way what MSMS is doing to resolve the professional liability problem and I also want to urge each of you to support and to join in the MSMS comprehensive program of work.

Occasionally, MSMS asks members to support some specific legislative proposal or to write to someone without explaining how all the pieces fit together.

The following few lines, to me, should help every physician better understand the immediate and long-range MSMS goals . . .

MSMS has (1) an aggressive program for legislation and governmental action now to help relieve the liability insurance situation in Michigan; and MSMS indeed has (2) a continuing effort to see that professional liability insurance is available to every doctor through a MSMS-sponsored group insurance program or some other vehicle.

As we work to accomplish these two broad objectives, MSMS has the following targets:

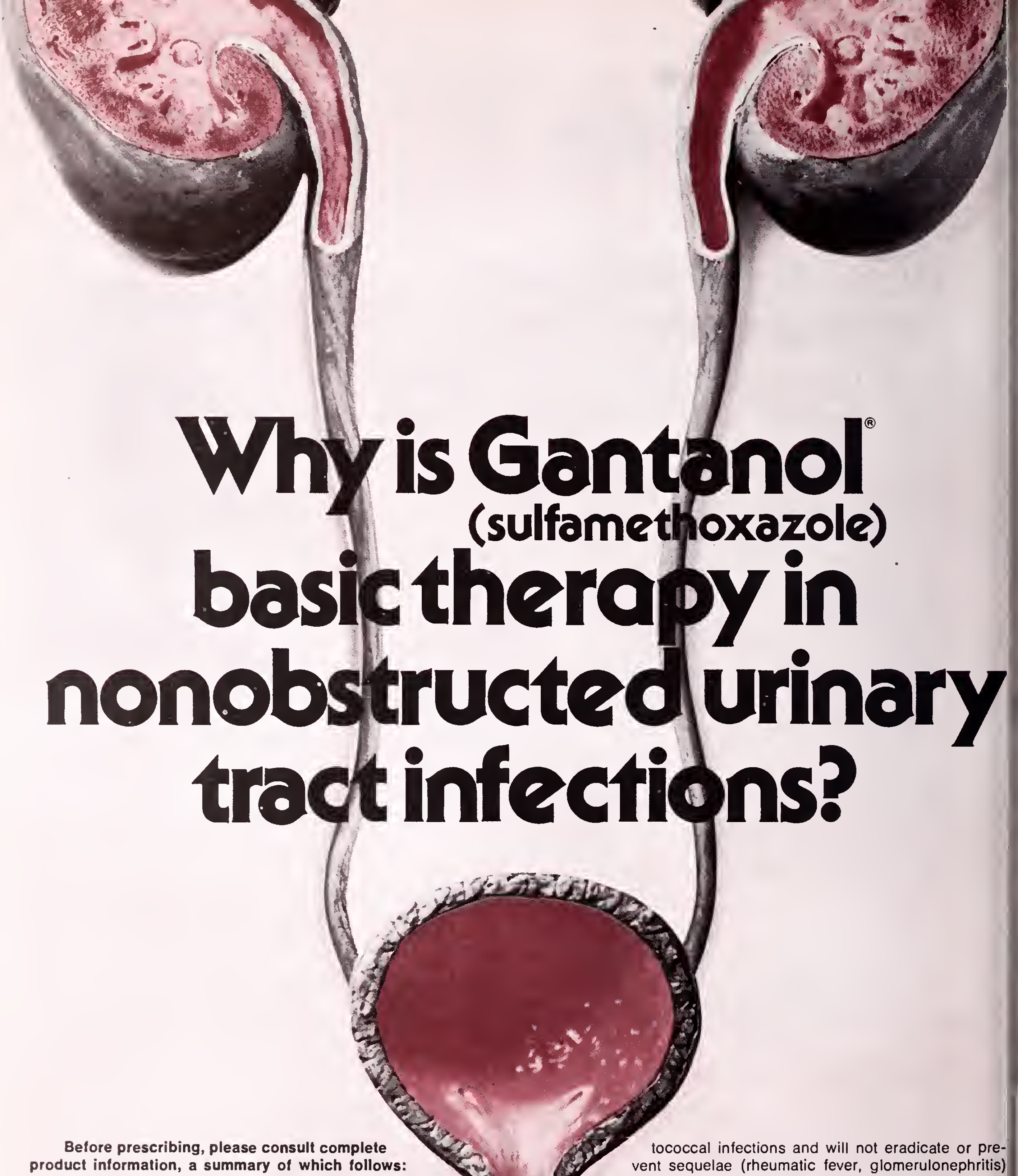
1. To assure the availability of professional liability insurance for every doctor
2. To help doctors obtain insurance at reasonable premiums
3. To permit contractural binding arbitration for doctors and patients
4. To stop abuses of contingency fee system
5. To reduce the number of nuisance court suits
6. To provide the Michigan Medical Practice Board with sufficient funds to permit the Board to function properly
7. To obtain facts from professional liability insurance firms so MSMS can develop continuing medical education programs to further improve medical care

I wanted to list these goals in short, precise sentences because you may not have seen the MSMS action plan stated in this way.

MSMS will continue to report at least three times each month to all members through *Medigram* and *Michigan Medicine* and MSMS leaders and staff will continue to provide progress reports for meetings of component societies, specialty societies and hospital staff meetings. The March 12 "Briefing" in Lansing provided first-hand reports to delegates, alternatives and component leaders.

I earnestly appeal to each of you to work with and through your patients, the general public, the component society and MSMS to insist upon prompt, responsible action from Michigan officials, state legislators, insurance firms, and all who can help assure the continuation of quality medical and hospital care to the people of Michigan.

Brooker L. Masters, MD



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Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

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Endobronchial Lipoma Associated With Squamous Metaplasia of Bronchial Mucosa

By M. Hakimi, MD, D. Font-Soto, MD, L. Gonzalez-Lavin, MD and J. C. Davila, MD
Detroit

Summary

A case of endobronchial lipoma associated with squamous metaplasia of endobronchial mucosa is reported bringing the total number of published cases in literature to 58 and the number of cases reported in English literature to 34. Paper also reviews the literature and outlines the diagnosis and management of the disease.

Bronchial lipomas are among the least common neoplasms of the tracheobronchial tree. The first such a tumor removed bronchoscopically, was reported by Kernan (1) in 1927. In 1970 Jensen (2) reported three new cases bringing the total published cases to 51. To this should be added a case reported by Ramsey (3), in 1969. Since that time, five more cases have been added to this number (3), (5), (6), two of which were reported by Bellin (7), in 1971, bringing the number of cases diagnosed and published in English literature to 33 and an overall number of cases to 57. The following case was associated with squamous metaplasia of the bronchial mucosa, giving a false positive reading of bronchogenic carcinoma in cytologic studies.

Case Report

S.C.: A 75 year-old white male was referred to Henry Ford Hospital on 8/1/73 because of nonproductive cough and radiologic findings of left upper lobe infiltrate, the patient's symptoms being mainly cough, which began two weeks prior to admission and gradually increased in this period. Three days before hospitalization, he became confined to bed with fever in addition to the preexisting symptoms. However, he was found to be afebrile on admission. He denied chest pain or hemoptysis. Prior to this episode, the patient had been living a normal life. He claimed to be only an occasional smoker of cigarettes and pipe.

Physical examination demonstrated an elderly white male, somewhat obese, in no acute distress with a temperature of 36.7° C. Pulse rate was 70 per minute and blood pressure was 120/70. The chest contour was slightly emphysematous with increased antero-posterior diameter. Fine rales could be heard at the right base and an occasional expiratory wheeze was audible over the left mid lung field, posteriorly. Auscultation of the heart did not reveal any abnormal findings. There was no hepato-splenomegaly or peripheral lymphadenopathy, clubbing of fingers or peripheral edema.

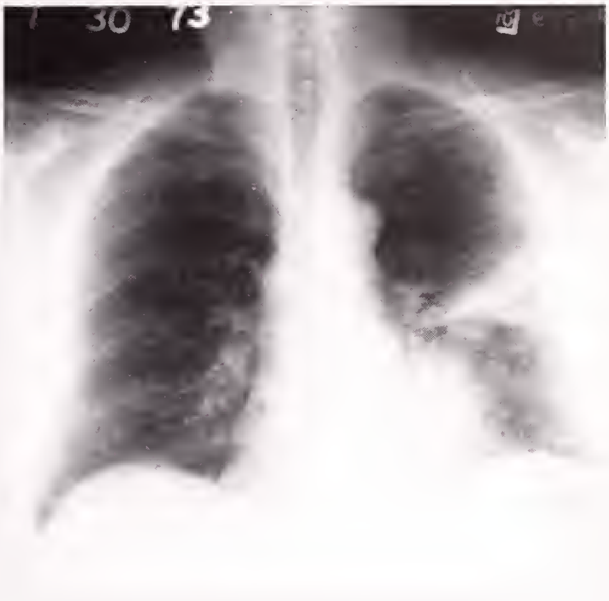

Figure 1. Postero-anterior chest x-ray shows infiltrate in the lingular division of the left upper lobe.

Laboratory findings included a normal blood count, electrolytes, blood urea nitrogen, creatinine and enzymes. X-ray of the chest with laminograms revealed atelectasis and infiltrate involving the lingular division of the left upper lob. *(Fig. 1).*

Bronchoscopic examination two weeks after admission revealed a lobulated, round, yellowish tumor mass located in the bronchus going to the lingular division. Obtaining a biopsy from the mass was rather difficult since it would easily slip out of the biopsy forceps and consequently the biopsy reports were inconclusive. However, cytologic examination of the bronchial washings showed some atypical cells compatible with bronchogenic carcinoma.

Skeletal survey and isotope studies of the brain and liver were negative for metastases.

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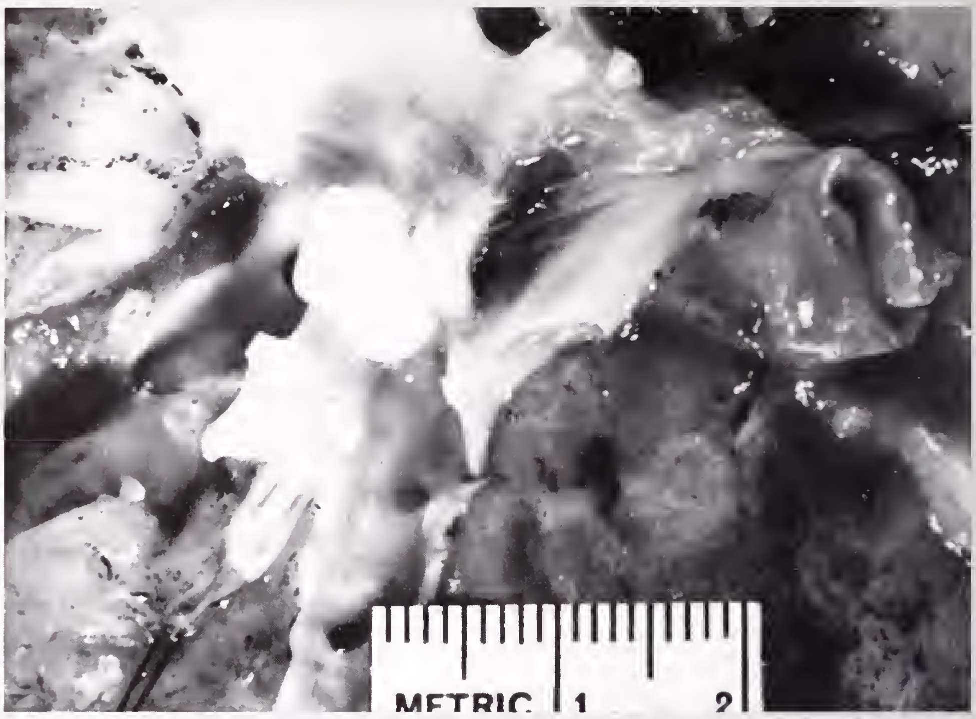

Figure 2. Macroscopic findings after opening the lingular bronchus. The lipoma is located at the bifurcation partially occluding both segmental bronchi.

With the diagnosis of carcinoma, the patient underwent a left thoracotomy and the lingula was found to be indurated but no definitive tumor mass could be identified. A left upper lobectomy was performed, and once the lobe was out and the bronchus opened, a 1x1.2 cm. yellowish, lobulated, polypoid mass with relatively narrow stalk was found to be sitting at the first division of lingular bronchus partially occluding both segmental bronchi. There were retained secretions and inflammatory changes present distal to the tumor. *(Figure 2)*

Histological examination was that of an encapsulated tumor containing large numbers of mature fat cells with overlying respiratory epithelium. *(Figure 3)* The bronchial mucosa and submucosal glands adjacent to the tumor had undergone squamous metaplasia. This probably contributed to the appearance of atypical cells in the bronchial cytology. The finding of lung distal to the tumor was mainly organizing pneumonia, fibrosis and bronchiectasis.

The patient had an uneventful postoperative course and was discharged on 8/31/73.

Discussion

The incidence of benign pulmonary tumors is about 2.5 percent of total lung neoplasms (8) and endobronchial lipomas are the least common benign tumors of the bronchial tree. They originate from the adipose tissue which is often present in the bronchi (9). These tumors are more common in the male and the age in published cases has varied between 29-85. Lipomas are most commonly situated centrally and could be visualized by endoscopy. The size of the lesions varies between 1-3 cms. in diameter. Sometimes the tumor has the shape of an hour glass with a portion of it located peribronchially. They are yellowish or yellowish-gray, round with a narrow base and smooth surface. They are solitary in contrast to skin lipomas. To differentiate these tumors from other benign lesions containing fat cells like hamartomas, Feller (10), emphasized that these tumors must be encapsulated and within them only contain fat cells. Only a few of the cases reported in the literature fulfilled this criteria.

The presence of squamous metaplasia of the bronchial mucosa noted in our patient is probably due to chronic infection and irritation of the mucous membrane caused by the presence of the tumor.

The clinical picture depends upon the extent of bronchial obstruction and varies from no symptoms in small tumors to symptoms of atelectasis and pneumonia. If the tumor is removed early, the lung findings are reversible; however, in the face of longstanding obstruction, bronchiectatic changes and abscess formation make the pulmonary resection mandatory. Laminograms and bronchographic studies are helpful to localize the endobronchial lesion. However, they are nonspecific. Bronchoscopy is the most useful tool in making the diagnosis of these lesions.

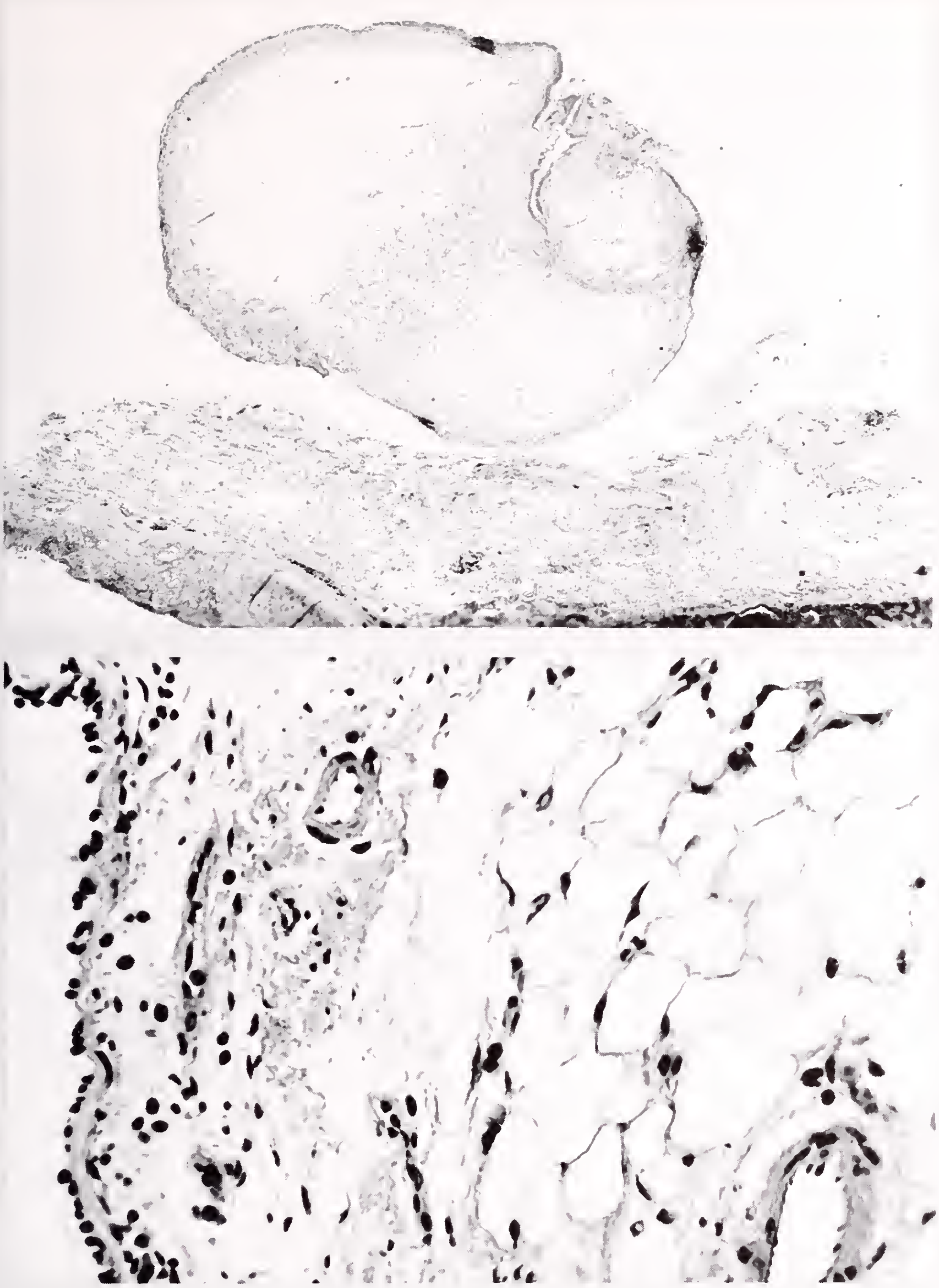

Figure 3. Low (A) and high (B) power findings in the histologic examination of the tumor. Tumor contains mainly fat cells and is encapsulated. Bronchial mucosa can be seen on the surface.

In the early stages of this disease and before permanent damage to the lung has occurred, local excision of the tumor through the bronchoscope or bronchotomy is sufficient treatment. In the case of permanent pulmonary change like bronchiectasis or abscess formation or when the diagnosis is not clear, resection of the corresponding portion of the lung becomes the treatment of choice.

Acknowledgment

The authors wish to thank Miss Olive Rundgren for her help in preparing this paper.

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(Continued page 139)

Perinatal Tips

Editors' Note: "Perinatal Tips," an informative feature of *Michigan Medicine* has been absent from the journal for several months. But now, with the author's convalescence from major surgery complete, we are happy to resume the publication of "Perinatal Tips."

By Paul M. Zavell, MD
Detroit

The following case from the files of the Wayne County Medical Society Perinatal Mortality Study Committee is presented as an aid in continuing education:

Maternal

This was the third born of an 18 year old Gravida III, Para II (III) white mother with A + blood type. Her pregnancy had been uncomplicated and she had received monthly prenatal exams by her obstetrician. She gained 20 lbs. during pregnancy. At 33-34 weeks gestation she noted sudden gushing of bloody vaginal fluid and severe abdominal cramps. She called her obstetrician who sent her immediately to the emergency room of a small hospital. There she was rushed to the delivery room where one and one-half hours after onset of the vaginal bleeding she delivered her son. She received 25 mgm Demerol and 25 mgm Phenergan during labor. Her post-delivery course was uneventful medically.

Fetal

This three-pound, two-ounce white male infant appeared normal at birth and physical exam was not remarkable. At one day of age the patient developed fine tremors of the extremities. Blood studies done at this time revealed calcium of 7.8 mgm% (9-11), blood sugar of 50 mgm% (70-110). It was thought the tremors were due to tetany of the newborn and the infant was placed on calcium gluconate by mouth ½ vial tid in glucose water. Despite this, tremors continued sporadically until the infant's death.

At 36 hours of age the infant was noted to be lethargic and a "little" jaundiced. Bilirubin done at this time revealed 8.1 mgm% total (8.0 mgm% Indirect). The nurses stated the infant tired quickly when being fed and feeding was changed to gavage feeding every three hours. However about every other feeding the infant regurgitated most of what was fed. 10% G/W 0.3 NS IV solution was then started.

At three days of age the tremors seemed to be worse and several apneic spells developed, relieved satisfactorily with oxygen in an isolette. Repeat calcium was 8.8 mgm%. A chest x-ray was done that showed "slightly increased pulmonary markings, generalized — not diagnostic of hyaline membrane disease and the heart shadow appears to be at the upper limits of normal." The calcium gluconate was increased to ½ vial qid and the infant was kept in oxygen 36-40%.

At four days of age the tremors became worse and the infant had a short generalized convulsion. He was more jaundiced than previously and very lethargic. Because it was felt he might have sepsis, a blood culture, spinal tap, throat culture and bilirubin were quickly done and the patient was started on intravenous Ampicillin 75 mgm every six hours. Twelve hours later the infant had a cardiac arrest after a prolonged apneic spell. Despite cardiac massage externally and intra-cardiac adrenalin (0.1cc) the infant was pronounced dead short of five days of age. Final diagnosis was "Premature Male Infant with Brain Damage and Possible Sepsis." An autopsy was done that revealed findings compatible with a meningitis. Specimens obtained of spinal fluid both before and after death revealed E. Coli.

Perinatal Committee Comments

1. Statistically a primipara or multipara teenager is more likely to have fetal abnormalities or problems than a mother in her twenties.
2. No maternal cause for the bleeding was given here. Possibilities include abruptio placenta, placenta previa and marginal sinus rupture.
3. With signs and symptoms suggestive of abruptio placenta, marginal sinus rupture or placenta previa, a double setup for sterile vaginal exam and immediate C-Section is ideal.
4. 20 lb. weight gain in 33-34 weeks gestation may not necessarily be considered abnormal. However the mother might well be investigated for a prediabetic state.
5. Each pregnancy must be considered individually but the dose of Demerol used here was considered on the small side.
6. Although hypocalcemic tetany seemed possible in this case, studies to rule out other causes (hypomagnesemia for example) could have been undertaken. We must not lose sight of infant narcotic withdrawal as a cause of the tetany.

(Continued page 139)

The author is a member, Neo-Natal and Hospital Care Committee, Michigan Chapter, AAP and Chairman, Perinatal Mortality Study Committee, Wayne County Medical Society.

Absorption Capacity Of the Upper Airway and Lungs

Part II – Preliminary Experimental Data

By Gianfranco Dal Santo, MD, Detroit

In certain therapeutic measures, such as aerosol therapy and inhalational anesthesia, you take advantage of the ability of the respiratory tract to absorb foreign substances and drugs.

Uptake and distribution of gaseous general anesthetics has been widely studied (1); not so that of aerosols. As previously mentioned (2), an aerosol is a suspension of fine particles of liquid or solid in a gas. To exert their pharmacological action, aerosols must deposit on the bronchiolar and/or alveolar surface.

It is generally assumed that once deposted the aerosols administered for patients' care are cleared by absorption into the blood and/or by lymph capillaries. However, it is apparent that pertinent information on the rate of aerosol absorption is limited.

We decided to conduct investigations to study the absorption by blood of one of the most common bronchodilators, which today are routinely administered as aerosols. The radioactive technique was used to tag the drug and trace the process.

To a series of dogs, anesthetized with nembutal (20 mg/kg), a trace dose of ^{3}H-labeled isoproterenol was administered as an aerosol produced in a Bird standard micronebulizer from 2 ml. of isotonic saline solution and through a Mark 7 Bird respirator. Samples of arterial blood were taken at various intervals during an average of 3 hours. The radioactivity was determined with a liquid scintillation counter.

Preliminary results indicate *(Fig. 1)* that:

a) The rate of appearance of the radioactive-labeled drug in plasma is extremely fast. A peak concentration is reached in about 15 minutes. This great rapidity of passage into the blood should be kept in mind when a bronchodilator is known to exert side effects and/or when the drug is administered at high doses.

Furthermore, you must think about the hundreds of varieties of aerosol sprays used in our daily life: insect killers, paints, solvents and many others.

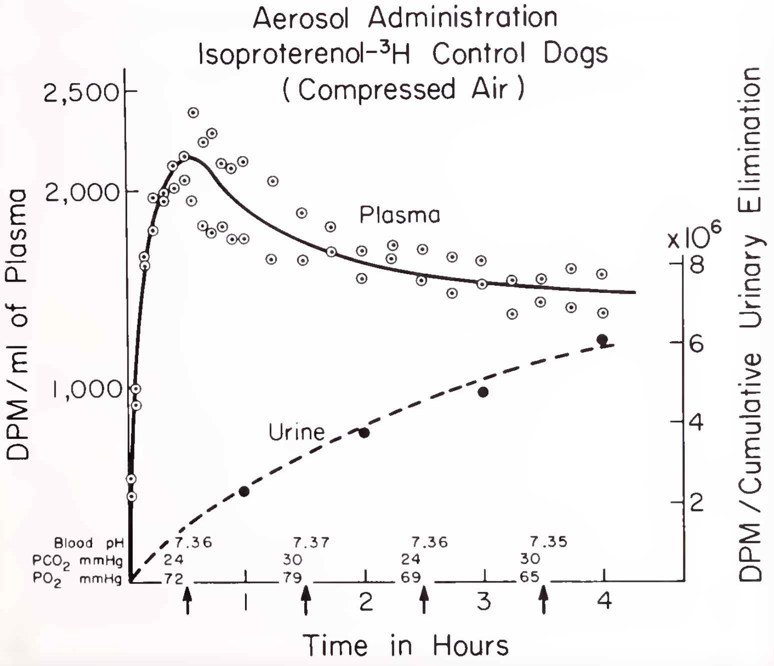

Fig. 1. Rate of appearances in plasma of tritium after aerosol administration of ^{3}H-isoproterenol in 2 ml. of saline to dogs under intermittent positive breathing.

Presented at the 18th annual All-Day Scientific Session of the Michigan Society of Anesthesiologists, May 11, 1974, Southfield, Michigan. Personal data reported in these articles were obtained with the aid of a Detroit General Hospital Research Corporation and United Health Foundation grant.

The author is professor of anesthesia, Wayne State University School of Medicine, Detroit.

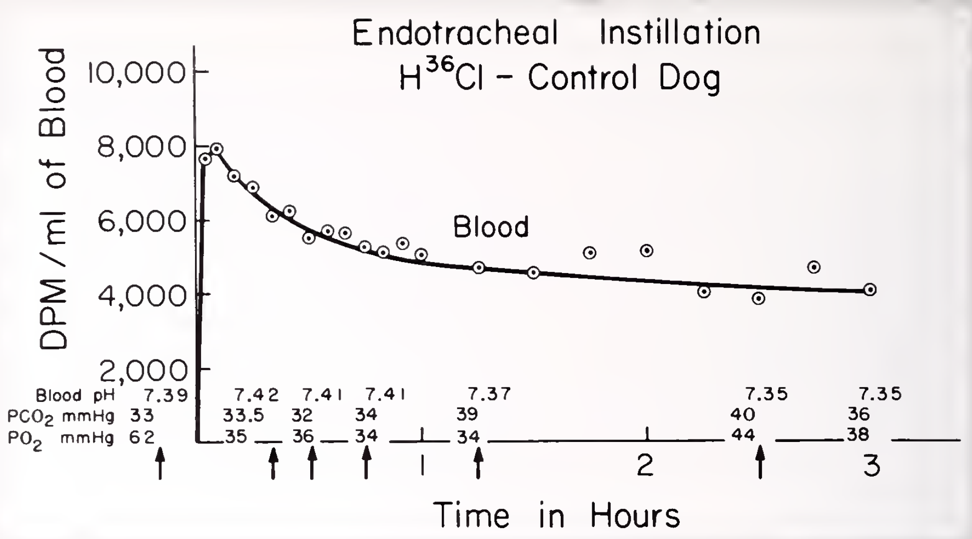

Fig. 2. Rate of absorption of radioactive-labeled hydrochloric acid after endotracheal instillation of a 20 ml. solution at pH 3.

It is apparent then that if the toxic substances contained in those aerosol sprays are inhaled, they can cause pathological changes in lungs and, in view of the rapid absorption, could produce systemic untoward effects.

b) Once the peak concentration has been reached, the level of the drug in plasma decreases exponentially but remarkably slowly. The fact that the concentration in plasma remained quite high even after the liquid content in the nebulizer was exhausted (about 45 minutes), suggests that after the aerosolization process in the nebulizer is complete the aerosol may deposit on the tubing of the system. Or, it may deposit on the upper airway. If the respirator is still in function, the deposition of the aerosolized drug may then be extended and its effects enhanced and prolonged.

c) The cumulative urinary elimination of the labeled material is active from the beginning. However, the urinary elimination plays a major role after the 45 minutes necessary for the nebulization of the whole solution.

d) Although the pulmonary ventilation was adequate (as confirmed by a low P_{CO_2}, the arterial P_{O_2} was constantly low. Compressed air for aerosolization seems to be an inadequate vehicle. Yet, compressed air is routinely employed for aerosol therapy at home.

A second series of experiments is underway to study the rate of endobronchial and endopulmonary absorption of hydrochloric acid as an important component of the gastric content.

As mentioned in Part I, pulmonary aspiration of gastric content is a common, serious and frequently fatal event (3). It occurs most often in obstetrical patients. But it also occurs in patients undergoing emergency surgery, during general anesthesia and in unanesthetized unconscious or semiconscious subjects, such as during drug intoxication, alcoholic stupor, cardiac arrest, acute respiratory insufficiency, convulsive disorders, drowning or tube feeding. The immediate effect of pulmonary aspiration is a chemical pneumonitis, the degree of which depends on the pH of the aspirated gastric content.

After a rapid endotracheal instillation of 20 ml. of a radioactive-labeled hydrochloric acid solution of pH 2-5, the following changes were observed *(Fig. 2):*

a) An extremely rapid, almost instantaneous absorption of HCl into the blood, recalling the speed of an intravenous injection. Obviously, the peripheral distribution within the lungs of aspirated hydrochloric acid is extremely rapid. This suggests that after aspiration of gastric content to conduct extensive bronchial lavage with an antiacid or saline solution might result in a too-late and therefore futile procedure to accomplish a neutralization or a dilution of the acid. Actually, if the volume of fluid used for lavage is abundant, it probably will force the acid into the most peripheral bronchiolar subdivisions and into the alveoli, thus spreading even more the area of injury. Most probably, an *immediate* instillation of no more than 10 ml. of saline, with prompt aspiration should be performed instead.

b) The arterial P_{O_2} is extremely low, despite artificial ventilation. Therefore, O_2 administration after aspiration is strongly indicated.

Acknowledgment

The technical assistance of D. Z. Gadzinski, M.S., and N.R. Koleta, C.R.N.A., is very much appreciated.

(Continued page 139)

BURN CARE IN GENESEE COUNTY

By Robert Whipple, MD
Denver

Introduction

It has been estimated that over 100,000 burn accidents occur in the state of Michigan annually. As a result, approximately 3,200 patients are hospitalized and 400 patients die from their injuries each year. This results in 385,000 disability days with an estimated medical cost of 13 million dollars.[2]

As of April, 1972, only five of Michigan's 200 hospitals provided specialized burn care. Since that time other burn facilities have been established. One of these is a five bed burn unit at Hurley Hospital in Flint, Michigan. This paper reports results of the first year's operation of that unit and describes the specialized care of burn injuries within the Genesee County Medical Community.

History and Description of Burn Care in Genesee County

Prior to the opening of Hurley Hospital's Burn Unit in May 1972, a four bed ward within the hospital's intensive care unit provided the only organized burn care available within the county. The increasing load of burn patients as well as the lack of adjacent hydrotherapy, specialized nursing care and cross-contamination to the other ICU patients, created the obvious need for an isolated special care unit. Although estimates were available for the number of burn unit beds needed, the unit size was limited by the available space.

The unit was a project of Hurley Hospital and several physicians on the trauma service without other community involvement. It opened in May, 1972, and for the first time, a standardized protocol for the treatment of burn wounds was available for the patients of Genesee County. The unit still remains the only locale for specialized burn care in the area.

Specialized burn care facilities are classified as 1) burn programs, 2) burn units and 3) burn centers. A burn program exists when a hospital has established a consistent plan for management, implemented by an interested and experienced physician or group of physicians. Specialized facilities or isolated areas are not needed. The program is expected to treat at least 25 patients per year.[1,3] A burn unit has a consistent plan of management, carried out in a specialized facility used for burns only. It is expected to have at least four beds and care for at least 35 patients per year.[1,3] Finally, a burn center is an expanded burn unit with at least six beds and cares for a minimum of 50 patients per year, and emphasizes teaching and research.[1,3]

In the April, 1972 issue of *Michigan Medicine,* Irving Feller, MD, of the University of Michigan estimated that the Genesee County area would need one burn unit and two burn programs. Only one burn unit and no burn programs have been established.

The Hurley Hospital Burn Unit contains five beds divided into a three bed area, and a two bed area, allowing for separation of adult and pediatric patients. Contained within the unit is a treatment room for the weighing, tubbing, debridement, and other minor procedures.[4] Patients never leave the unit except to go to the operating room. The unit is equipped with a Laminar Air Flow System and everyone who enters must wear clean surgical gown, cap and mask.

Burn care begins in the emergency department where the patient is evaluated by the surgical resident assigned to, or on call for, the burn unit. All new burns are admitted to the unit. If the unit is filled, new burns with involvement of more than 15% body surface area, full thickness burns or those with significant complicating factors take priority. Intravenous fluids, CVP catheters, Foley catheters, Nasogastric tubes, laboratory studies, X-rays and administration of medications are initiated either in the emergency department or in the treatment room of the burn unit. When the patient arrives at the unit he is tubbed, weighed, debrided and topically medicated. Topical burn wound care consists of Betadine ointment to all body surfaces except the face, hands and perineum where Neosporin and Garamycin ointment are used. Dressings are not generally used.

Data

With this background information we have evaluated the quality of burn care as it currently exists in Genesee County after 18 months experience with a burn unit. On the basis of Doctor Feller's work previously referred to, it is possible to estimate the number of burns which *should* have required treatment in the community. If these figures are compared to actual admissions, it is

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Doctor Whipple was a surgical resident at Hurley Hospital, Flint, when this article was written. He now is with the Department of Surgery, Colorado State Hospital, Pueblo, 81003. Reprint requests should be addressed to him there.

Figure 1.
Percent Survival Vs. Age and Total Area Burned

	AGE						
% BURN	0-1	2-4	5-34	35-49	50-59	60-74	75-100
0-9	100	100	100	99	97	95	80
10-19	99	99	100	98	96	78	61
20-29	91	95	98	94	84	54	44
30-39	75	82	91	77	58	23	0
40-49	54	67	83	60	38	13	0
50-59	20	44	66	47	27	11	0
60-69	6	22	49	32	19	8	0
70-79	20	25	23	8	25	0	0
80-89	0	5	14	8	6	0	0
90-100	0	9	3	0	0	0	0

National Figures Based on 10,051 Cases

possible to determine 1) if national figures are valid to estimate local needs for burn care, and 2) if health care facilities are available to meet the needs of the community. The second question can be answered even more precisely by comparing the survival rate in the burn unit to national standards.

Two methods are available to estimate the number of burn admissions per year within a given community. The first is based upon the community's population and does not consider referrals from other areas. National figures indicate that annually one person out of each 2,800 will sustain a burn injury requiring hospitalization. Thus, if Genesee County's 1970 census population of 445,589 is divided by 2,800 we could expect 159 burn admissions per year.[6] The second method is based upon referrals into a community. According to national figures, one of each 420 admissions to a hospital will be a burn. If the number of hospital admissions (80,168 for Genesee County in 1972), is divided by 420, 191 burn admissions should be expected each year.[6] The actual number of burn admissions to Flint's three largest hospitals during a recent one year period was 135. Admissions to two osteopathic hospitals, for which figures were not available would increase this number.

The expected average daily census of burn patients can be calculated by dividing the number of actual admissions by 20, which is the average length of stay in days for burns of the skin.[6] Since Genesee County does receive referrals, calculations are made on the basis explained previously, which takes referrals into account. The calculated expected daily burn patient census is then 9.5. Actual statistics are not available for the entire community.

Based on national figures, 53% of all burn admissions will be severe enough to require care in a special burn unit. Thus, by multiplying the daily burn patient census by 0.53, expected distribution of the daily burn patient census for the community to a special burn unit can be calculated, for Genesee County.[6] The expected daily census should be 5.0 while the actual daily census at Hurley Hospital's Burn Unit was 3.21.

The number of beds needed for a community can be estimated by dividing the desired percentage occupancy into the expected burn unit census. If an 80% occupancy is desired, Genesee County would need 7.0 burn unit beds,[6] while the burn unit now runs at only 64% occupancy with five beds.

If this portion of the study is summarized, the Genesee Medical Community falls below the national average for the number of burn wounds which are hospitalized and it appears that Genesee County's burn care facilities are adequate to serve its consumers.

Knowledge that the burn unit is only 64% occupied, however does not reflect the efficiency and appropriateness of burn care. For this reason, charts of all burn patients admitted to the three largest community hospitals for a one year period were reviewed, in an effort to study burn wound triage within the community, i.e. sorting and evaluating burn patients.

Burn wound triage is the key to proper burn treatment. Six major factors judge the relative severity of a burn injury and subsequently the level of burn care required. These are 1) age of the patient, 2) total burn area in percentage of body surface, 3) percentage area of full thickness burn, 4) location of burn on the body, 5) past medical history and 6) other injuries. Although the first three factors are the most vital, the extent of full thickness burns is difficult to estimate initially and is therefore, less significant for initial triage.

If the percentage survival of 10,051 burn cases, collected through the National Burn Exchange,

Figure 2.

Recommended Burn Care Facility Triage

Age			With Severity Factors	
	1-19%	20-100%	1-19%	20-100%
2-59 Years		▤	▤	▥
60+ Years 0-23 Months	▤	▤	▥	▥

Figure 3.

Recommended Burn Care Facility Triage

Age			With Severity Factors	
	1-19%	20-100%	1-19%	20-100%
2-59 Years	73.9%	4.3%		
60+ Years 0-23 Months	21.7%			

Percentages for St. Joseph Hospital October 1972 through September 1973.

Figure 4.

Recommended Burn Care Facility Triage

Age			With Severity Factors	
	1-19%	20-100%	1-19%	20-100%
2-59 Years	75.0%	12.5%		4.2%
60+ Years 0-23 Months	4.2%	4.2%		

Percentages for McLaren Hospital October 1972 through September 1973.

are charted against age and total area burned, there is a point of significant change in percentage survival for each factor *(Figure 1)*,.[2,3] For example, survival is lower for those under two and over 60 years of age, and similarly lower for those with greater than 20% body surface involvement.

For any given patient the survival rate drops again if any of the last three severity factors are added. Based on this information, and noting that all patients with burns serious enough to require hospitalization need some level of specialized treatment, recommendations for burn care facility triage have been proposed and published *(Figure 2)*.[2,3]

Those patients between the ages of two and 59 with less than 20% burns could best be served in a burn program. The remainder could best be cared for in a burn unit, except for patients with additional severity factors who have 1) greater than a 20% burn, 2) who are under two years of age or 3) over 60 years of age. Those patients might benefit more from care at a burn center because of the more intensified use of house staff, social service, microbiology, skin banks and rehabilitation services.

Let us examine the quality of triage and care during this one year period. Hospital charts were considered to be of poor quality in that major factors previously listed for initial burn injury triage were not properly recorded. The percentage of total body surface area involved was not noted in 80% of the charts.

At St. Joseph Hospital, Flint, from October, 1972 through September, 1973, 30 burn patients were admitted *(Figure 3)*. Twenty-three charts were available for review. Approximately 74% of these patients were judged to require a burn program, while 26% should have been in a burn unit. One patient was eventually transferred to a burn unit. There were no deaths. The type of burn wound care varied from patient to patient in this hospital which has no specialized burn care program.

At McLaren Hospital, 27 burn patients were admitted from October, 1972 through September, 1973 *(Figure 4)*. Twenty-four charts were made available for review. Seventy-five percent of these patients were judged to require burn program care, and 25% a burn unit or center. Again, no deaths were reported and none of the patients were transferred from this hospital which has no specialized burn care program either.

Hurley Hospital had 78 burn injury admissions from November, 1972, through October, 1973 *(Figure 5)*. Seventy-two charts were available for study. All patients were admitted to the burn unit initially. Fifty-one percent of the admissions were judged to require a burn program and 48% a burn unit or center. Two deaths were recorded, one a 70% burn in a 30 year old and the other a 60% burn in a 16 year old *(Figure 6)*. No patients were transferred elsewhere. Survival rates compared well with national figures.

Comments

One hundred thirty-five burn injury patients were admitted to Genesee County's three largest hospitals during a 12-month period. Forty-eight of these patients met the criteria for burn unit care while only 36 received it. Of the 87 patients who met the criteria for care in a burn program, 35 did not receive specialized burn care, while 52 were initially treated in a burn unit.

Conclusions

The number of burn patients admitted during a 12-month period of study in Genesee County was less than the national average. The percentage of burn injury admissions requiring treatment within a specialized burn unit was similarly below expected figures.

Genesee County has within its borders one five bed burn unit and three major teaching hospitals staffed with physicians qualified to treat burns. A major burn center at Ann Arbor is an hour away. Nevertheless, nearly 40% of the burn patients admitted to a hospital within the county received *less* than the specialized care deserved. Nearly 80% of patients' records did not contain adequate information for proper triage. Outside of the burn unit there is no established protocol for the treatment of burn wounds. Yet it has been estimated, and confirmed by our data, that at least two burn programs are needed.

Wherein lies the fault, and what corrections should be made? Genesee County has the facilities, equipment, and man-power to care for the burn injuries which occur within its borders and could certainly manage a significant number of referrals. Yet hospitals within the area do not co-operate to provide the efficient and specialized care needed. Improved communications between interested physicians and participating institutions would be beneficial. Burn programs would evolve and attending physicians and residents would be better trained to evaluate, triage and properly care for burn patients. Adequate record keeping systems should be developed, and from these studies would lead to even more efficient management, aimed toward the ideal of reduction in mortality and morbidity.

Figure 5.

Recommended Burn Care Facility Triage

			With Severity Factors	
Age	1-19%	20-100%	1-19%	20-100%
2-59 Years	51.4%	18.6%	8.6%	5.7%
60+ Years 0-23 Months	12.9%	1.3%	1.3%	

Percentages for Hurley Hospital November 1972 through October 1973.

Acknowledgment

I am grateful to Frank Wade, MD, Richard Rapport, MD and Martha Whipple, RN for their support and assistance.

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Figure 6.

Percent Survival Vs. Age and Total Area Burned

Age

% Burn	0-1	2-4	5-34	35-49	50-59	60-74	75-100
0-9	100	100	100	100	100		
10-19	100	100	100	100		100	
20-29	100	100	100	100	100		
30-39			100				
40-49		100	100				
50-59		100	100				
60-69			0				
70-79							
80-89			0				
90-100							

Hurley Hospital figures based on 78 cases

Monthly Surveillance Report

Cases of Certain Diseases
Reported to the Michigan Department of Public Health
For the Five Week Period Ending January 30, 1975

	1975 This 5-Week Period	1974 Same 5-Week Period	1975 Total To Above Date	1974 Total Same Date	Total Cases for 1974
Rubella	104	146	104	146	1,388
Cong. Rubella Syndrome	0	0	0	0	1
Measles	152	167	152	167	2,365
Whooping Cough	16	9	16	9	104
Diphtheria	0	0	0	0	0
Mumps	1,265	920	1,265	920	7,230
Scarlet Fever & Strep Sore Throat	2,733	4,248	2,733	4,248	31,802
Tetanus	0	1	0	1	6*
Poliomyelitis (Paralytic)	0	0	0	0	2*
Hepatitis	298	413	298	413	3,599
Salmonellosis (other than S. typhi)	89	137	89	137	1,001
Typhoid Fever (S. typhi)	0	1	0	1	11
Shigellosis	107	93	107	93	1,436
Aseptic Meningitis	7	14	7	14	162
Encephalitis	4	2	4	2	69
Meningococcic Meningitis	10	4	10	4	54
H. Influenza Meningitis	13	15	13	15	121
Tuberculosis	129	132	129	132	1,345*
Syphilis	143	314	143	314	2,659
Gonorrhea	2,930	3,157	2,930	3,157	32,152*

Information can be supplied by the local health department on the local incidence of disease.

Maurice Reizen, M.D., Director
Michigan Department of Public Health

*Corrected totals.

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

ENDOBRONCHIAL LIPOMA/*Continued*

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6. Ribert, J., Wallaert, C., Gosselin, B., et al.: Lipome endobronchique. *Littl Med.* **16:**750, 1971.

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ABSORPTION CAPACITY/*Continued*

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1. Eger, E.I. *Anesthetic Uptake and Action.* William Wilkins, Baltimore, 1974.

2. Dal Santo, G. Absorption Capacity of the Upper Airway and Lungs. *Mich. Med.* **74:**81-82, 85, 1975

3. Hamelberg, W. and Bosomworth, P.P. *Aspiration Pneumonitis.* Thomas Springfield, 1968.

PERINATAL TIPS/*Continued*

7. A diagnosis of hypocalcemia is on shaky ground without the additional study of phosphorous levels.
8. Any infant (*especially* premature) who is jaundiced, lethargic, sucking poorly, and/or irritable, should alert one to the possibility of infection. Appropriate studies should have been started at a much earlier period than four days of age.
9. Dosage of Ampicillin for suspected meningitis is recommended as 400 mgm/Kg rather than approximately half that amount as used here.
10. With the emergence of Ampicillin-resistant bacteria we can no longer rely only on Ampicillin alone for treatment of sepsis or meningitis or other serious disease. The addition of Kanamycin, Chloromycetin (despite the infant's size), Gentamycin should be considered.
11. Jaundice of prematures when felt to be due to liver immaturity and jaundice of ABO blood incompatible infants might be treated by photo therapy and occasionally by phenobarbital or serum albumin but *when needed* there is not yet an entirely satisfactory alternate to properly executed blood exchange transfusion.

Legislation: *The Michigan MD's Guide*

In these days, legislation has crucial importance to the physician and his patients. It affects all the people, as it has much to do with the kind of medical care they receive. Members of the MSMS Department of Government Relations have compiled the following resumes of state and federal legislation, predictions of coming legislative action, and descriptions of MSMS legislative programs. Michigan Medicine *presents them here, along with a directory of Michigan congressmen and key legislators, to assist Michigan physicians in their deliberations during the coming year.*

The Michigan Picture

By Bruce W. Ambrose
Manager, MSMS Department of Government Relations

Sponsoring, fighting, analyzing and ordering priorities for a plethora of professional liability bills dominates the charge to the MSMS Committee on State Legislation and Regulations, as the new Legislature gets into hard work in its new session.

The Committee already has obtained Council authorization to proceed with 37 of its own bills designed to improve the professional liability climate in Michigan.

Meanwhile, in a meeting with officers and staff of the Physicians Crisis Committee, it identifies four PCC bills which, with Council concurrence, MSMS will support in legislation action.

Direction for the malpractice legislation came from the Committee on Professional Liability, the Liaison Committee with the State Bar, and from the committee's own observations.

MSMS' legislative package on malpractice has been distributed through Medigram.

Meanwhile, the committee was preparing to review, late in February, at least two legislative proposals to meet the insurance availability problem through state assigned risk or pool mechanisms. The first assigned risk bill was introduced by Sen. Cooper (D-Oak Park) and 29 others Feb. 18. A variation on the pool idea was part of a report being prepared by Michael Dively and the Insurance Bureau for the Governor, also Feb. 18.

Other legislation also attracts the committee's attention, however. It has taken the leadership in sponsoring a bill to more clearly define chiropractic limitations. It will seek to have legislation introduced permitting the physician to determine moment of death for transplantation purposes.

Members of this Committee are: Thomas R. Berglund, MD, Chairman; Thomas A. Barton, MD; Martin L. Beard, MD; Frederick W. Bryant, MD; Robert B. Burrell, MD; William A. DeYoung, MD; James J. Gibbons, MD; Perry W. Greene, Jr., MD; Kenneth H. Johnson, MD; Wil E. Maldonado, MD; Glenn E. Moore, MD; Charles L. Oppy, MD; Thomas C. Payne, MD; James A. Read, MD; Russell C. Rowan, MD; Thomas J. Setter, MD; Clark B. Smith, MD; Robert J. Solomon, MD; Jack M. Stack, MD; Ethon Stone, MD; Franklin L. Troost, MD; Louis R. Zako, MD; Robert M. Leitch, MD, ex officio; Brock E. Brush, MD, ex officio; Mrs. R. J. Westerhoff, Auxiliary Representative; A. Stewart Kerr, Advisor; William Hobbs, MSU Student Advisor and Bruce Ambrose, MSMS staff.

Prior to announcement Jan. 30 of comprehensive MSMS legislative proposals to solve the malpractice insurance problem, the MSMS Committee on State Legislation and Regulations met to form recommendations with the Physicians Crisis Committee and the Michigan Association of Osteopathic Physicians and Surgeons. They were led by Committee Chairman Thomas Berglund, MD, Kalamazoo, standing.

The state's osteopaths were represented by Vincent Murphy, DO, Grand Blanc, MAOPS lobbyist. He was flanked by MSMS Council Chairman Robert M. Leitch, MD, left.

MSMS Committee On State Legislation At Work

Representing the Physicians Crisis Committee were, from left, Karen Johns, public relations director; Arthur B. Eisenbrey, MD, chairman and Robert Pool, MD, executive board member.

Members of the new MSMS Committee on Federal Legislation met for the first time recently. They are led by Robert E. Rice, MD, Greenville, right.

The Washington Picture

Presidential signing of the National Health Planning and Resources Development Act of 1974 concluded congressional health and medical activity for 1974, and laid the foundation for what many believe may be the year of National Health Insurance legislation — 1975.

The new health planning bill, which passed on the final day of the 1974 session, will replace the Comprehensive Health Planning Program and the Regional Medical Programs. It will further modify and extend the Hill-Burton hospital construction program. States will be required to adopt certificate-of-need legislation governing the development of new institutional health services.

The bill also authorizes grants for demonstration projects with respect to the regulation of rates for the provision of health care.

In an attempt to fully understand the new planning bill and its implications for physicians, either collectively as medical societies, or individually, the Michigan State Medical Society Committee on Federal Legislation has begun an in-depth study of the bill's real meaning.

Staff and physicians have attended conferences sponsored by HEW on the bill.

Robert E. Rice, MD, Greenville, chairman of the Committee on Federal Legislation, has characterized the planning act "as significant as PSRO."

Under the planning act, a system of health systems agencies will be developed much like PSRO areas. Local and state agencies will develop and implement both long-range and short-range health plans under national guidelines developed by the Secretary of HEW. The Secretary must issue such guidelines within 18 months, and the guidelines will include standards respecting the appropriate supply, distribution and organization of health resources as well as a statement of national health planning goals expressed in quantitative terms. The national guidelines shall include — the development of multi-institutional systems and coordination of consolidation of institutional health services (including obstetrics, pediatrics, emergency medical, intensive and coronary care and radiation therapy services) — the development of medical group practices, health maintenance organizations and other organized systems for the provision of health care — the training and increased utilization of physician assistants, especially nurse clinicians and the adoption of uniform cost accounting, reimbursement and utilization reporting systems.

Serving with Doctor Rice on the MSMS committee are H. Richard Henderson, MD, Edward Turner, MD, Reuven Bar-Levav, MD, Rosser Mainwaring, MD, Frederick Engstrom, MD, William Jones, MD, and Kenneth Ray, MD, all of Wayne County; John McLaughlin, MD, and Joel Hamburger, MD, of Oakland County; Frederick VanDuyne, MD, and Richard McMurray, MD, Genesee County; Leland Brown, MD and Joel Kriegel, MD, Macomb County; D. Bonta Hiscoe, MD, Sidney Katz, MD, and Maurice Reizen, MD, Ingham County; Leonard Howard, MD, and John J. D. Schwarz, MD, Calhoun County; John Wilson, MD, and Carl Moberg, MD, of Kent County; John Wood, MD, and John Coles, MD, of Isabella County; Thomas Kretschmer, MD, Saginaw; William Davison, MD, Port Huron; Charles Willison, MD, Midland County; and Otto Engelke, MD, Washtenaw County.

BWA

Michigan's Men in Washington

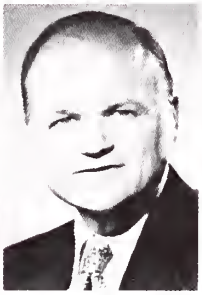
Our Representatives

John Conyers, Jr.
First District
Democrat

Marvin Esch
Second District
Republican

Garry Brown
Third District
Republican

Charles Diggs, Jr.
13th District
Democrat


Lucien Nedzi
14th District
Democrat

William Ford
15th District
Democrat

Edward Hutchinson
Fourth District
Republican

Richard VanderVeen
Fifth District
Democrat

Bob Carr
Sixth District
Democrat

John Dingell
16th District
Democrat

William Brodhead
17th District
Democrat

James Blanchard
18th District
Democrat

Donald Riegle, Jr.
Seventh District
Democrat

Bob Traxler
Eighth District
Democrat

Guy VanderJagt
Ninth District
Republican

William Broomfield
19th District
Republican

Elford Cederberg
10th District
Republican

Philip Ruppe
11th District
Republican

James O'Hara
12th District
Democrat

Our Senators

Philip Hart
D — Mackinac

Robert Griffin
R — Traverse

NHI—The Outlook

By Bruce Ambrose
Manager, MSMS Department of Government Relations

You can make just about any bet you want on when national health insurance will pass the Congress. But just about anybody now will bet that it will pass in this Congress.

The question of whether NHI comes this year or next is becoming party-oriented.

While Democratic spokesmen feel NHI is taking on more importance in order to take care of the growing number of unemployed Americans without insurance coverage, President Ford has announced a moratorium on the idea because of the economy. The President proposes to introduce the administration's NHI plan next year, after his one-year moratorium on new federal spending programs is over.

Several NHI proposals already have been introduced in Washington.

HR1, by Congressman Al Ullman, new chairman of the House Ways and Means Committee, leads the parade. Ullman predicts that his committee will write a bill that will be on the House floor for a vote in early fall.

The National Health Security Act (HR21 and S3) by Congressman Corman and Senator Kennedy, also went in the hopper early.

The AMA's revised Medicredit proposal was expected by late in February.

Washington sources say that if NHI or an initial stage of it is adopted this year, it will most likely be a catastrophic plan similar to the Long-Ribicoff bill of last session.

Meanwhile, pro-NHI lobbying forces are rallying about the Capitol.

National Health Insurance Lobbying Forces Growing

President Ford puts NHI among his top priorities and has been working closely with his Domestic Council and HEW on plans to revise the Nixon Administration's Comprehensive Health Insurance Program (CHIP) proposal for greater acceptability among congressmen.

Several leading health organizations, including Blue Cross, Blue Shield, American Hospital Association, and health insurance groups, either have or will in the next few months assign members of their lobbying staffs solely to NHI matters.

Already the Committee for National Health Insurance (CNHI) — sponsor of the labor-backed Health Security proposal — announced it would increase the benefits in Health Security for introduction in 1975. In spite of the nation's economic uncertainty, the CNHI decision shows labor is confident that it can persuade Congress this time around.

Many of the pieces needed for NHI are beginning to fall into place. PSROs, HMOs, paramedic training, comprehensive health planning are the building-block programs advancing toward NHI.

Several big businesses formed the Washington-based Group on Health — to protect their interests because they envisioned that NHI would drive up their compensation costs.

A new Health Subcommittee of Ways and Means will be able to spend much of its time on NHI, unlike the procedure followed in previous years when the full Ways and Means Committee worked on several different measures simultaneously.

Senate Finance Chairman Russell Long (D-La.) has repeatedly promised members of Ways and Means that if the House manages to pass a NHI bill, the Senate would get it out fast (though not without Senate Finance changes).

The spirit of compromise that dominated NHI hearings before Ways and Means last summer is bound to affect new NHI proposals to be introduced this year. The feeling on Capitol Hill, though, is reportedly that the last draft prepared by Ways and Means staffers for then Chairman Wilbur Mills — the draft Mills tried to ram through the committee — will be the nucleus for initial NHI action because several portions of it were approved by the full committee.

The Mills draft was a compromise between the administration's CHIP and the Mills-Kennedy proposals.

Last summer's parade of witnesses before Ways and Means clearly demonstrated that the NHI debate was not whether the nation should have national health insurance, but rather what kind it should be. In general, witnesses agreed on two broad goals: (1) Medicaid should be replaced with a comprehensive, subsidized health insurance plan for low-income people, and (2) everyone should be protected against catastrophic medical expenses incurred through illness or accident.

A recently formed "cartel" of the AMA, AHA, the Blues, private health insurers, NMA and business organizations should have important clout. These diverse groups were invited to the White House to see if they could reach consensus on a NHI plan to be sponsored by the Ford Administration. After two meetings with HEW Secretary Caspar Weinberger seemed to produce general agreement on the major issues, the organizations decided to meet on their own in working sessions.

MDPAC Offers the Way To Get Involved Politically

By John Richards
MSMS Department of Government Relations

To many, it may seem redundant to explain what the Michigan Doctors Political Action Committee is and what it does. Surprisingly, however, there are many physicians and others in the medical community that are unaware of the purpose of the committee.

Simply, MDPAC is a voluntary, non-profit, bipartisan, unincorporated group whose membership consists of physicians, their spouses and other friends of medicine.

MDPAC was formed because Michigan doctors have learned that the time to influence legislation is at the time of election, rather than on a crisis-to-crisis basis as bills are introduced.

MDPAC also represents an expression of faith in representative democracy and the idea that good men should be supported for public office if that system is to function in the way that it was designed.

MDPAC's primary function is to raise funds to support candidates it feels will give organized medicine a fair hearing when legislation is introduced that will have an impact on organized medicine. Selection of these candidates is made by a 30-member board of directors, elected from the MDPAC membership at the annual meeting. The board is representative of the political structure of the Michigan medical profession both geographically and philosophically.

Members of MDPAC pay dues of $25 for regular and $100 for sustaining memberships each year and these are the funds distributed to candidates. Fifteen dollars are retained in Michigan while $10 are sent to the national organization, AMPAC, which is similarly structured but contributes to candidates for federal office. AMPAC only makes contribution upon request of the MDPAC Board of Directors, which means that the responsibility of candidate selection always remains at the local level.

MDPAC members are urged to communicate information about candidates throughout the year to their local representatives on the MDPAC Board. Thus, when it comes time to make decisions, the board will have opinions of as many MDPAC members as possible.

This year it is doubly important the people at the local level keep the committee informed of deserving candidates as new federal campaign reform limits the total amount of money any individual can accept in contributions.

There are many diverse opinions about the right way to go about the delivery of health care and it is evident that people are increasingly willing to pass legislation dictating and controlling this area.

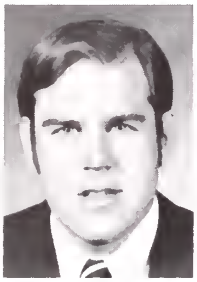
It is only through the concern and concerted action of individuals who are experts in the field that legislation can be passed that will reflect accurately the realities of the situation. This is where contributions to MDPAC are so important. Only by supporting candidates who are willing to listen to doctors and others familiar with the problems of medicine can we ever hope to pass legislation that is meaningful but also effective.

Looking at it objectively, everybody belongs to a special interest group and this is the premise on which the whole system is based. Our legislators are there to judge and balance the interest of one group against the other. The only people who represent a subversive element in this system are those individuals who refuse to participate, for it is those individuals that effectively act to short-circuit the system.

It is hoped that this article will stimulate those individuals who have not made a contribution to do so. But more importantly, it should stimulate you to personally get involved in the politics of your country.

Michigan's Legislative Leaders

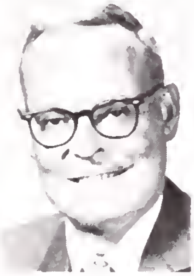
Senate



William B. Fitzgerald (D-Detroit) is the youngest Senate Majority Leader in history. A lawyer, he also is chairman of the Senate Business Committee, Committee on Committees and Legislative Council. He formerly served two terms in the House where he was chairman, Committee on Economic Development and Select House-Senate Committee to Investigate the Energy Crisis.

Daniel S. Cooper (D-Oak Park) is Majority Floor Leader and chairman of the Senate Commerce Committee. He is a lawyer and former college instructor of political science and English. He formerly served six years in the House of Representatives.

Basil Brown, (D-Highland Park) is Senate Democratic Whip, dean of the Senate and vice chairman of the Senate Democratic Caucus. A lawyer, he has served in the Senate since 1946. He is former Democratic Majority Floor Leader and is serving for the second time as chairman of the Judiciary Committee.



John E. McCauley (D-Grosse Ile) is Democratic Caucus Chairman of the Senate. He is a lawyer. He has been a member of the senate since 1964 and is former Wyandotte mayor and chairman, Wayne County Board of Supervisors.

Robert W. Davis (R-Gaylord) has served in the State Legislature for nine years, and is 1975 Republican Leader. He previously served two terms in the Michigan House. He was a member of the St. Ignace City Council and holds a degree from Wayne State College of Mortuary Science.

John F. Toepp (R-Cadillac) has been Republican Floor Leader since 1970. He was Senate Republican Whip in 1968-69. He is in his third term as a senator and previously served one term as a representative. He is a professional broadcaster.

Sen. *Donald E. Bishop* (R-Rochester) beginning his second term in the Michigan Senate, is Republican Whip. He served in the House from 1966 to 1970. A lawyer, he is a governor's appointee to the Michigan Advisory Committee on Criminal Justice.

Charles O. Zollar (R-Benton Harbor) has been a senator 10 years and this session serves as Republican Caucus Chairman. He is ranking member and former chairman of the Senate Appropriations Committee and heads four southwest Michigan corporations.

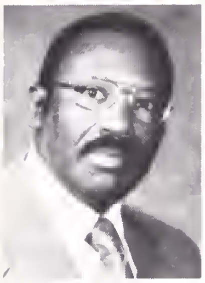
Key Committee Heads

Jerome T. Hart (D-Saginaw) is chairman of the Senate Appropriations Committee. He is in his fourth term and is former Democratic Floor Leader. He is a member, Michigan Alcohol and Addiction Association, Welfare Study Commission, Michigan Commission on Criminal Justice and Governor's Action Committee on Corrections.

John R. Otterbacher, (D-Grand Rapids) is chairman, Senate Health, Social Services and Retirement Committee. He also is chairman, Senate Special Committee to Investigate Nursing Homes. He has a PhD in clinical psychology and is former Aquinas College assistant professor. He previously served a term in the Michigan House.

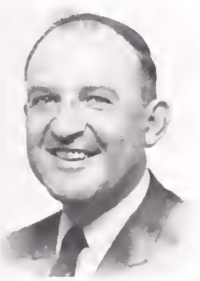
House of Representatives

Bobby D. Crim (D-Davison) is Speaker of the House. He is serving his second term and formerly was majority floor leader. Previous to that he was coordinator and member, Genesee County Board of Supervisors, and Davison County Councilor. He is a teacher.



Matthew McNeely, (D-Lansing) is Speaker Pro Tempore and also chairman of the Committee on Insurance. He has been a legislator since 1964 and is director, Michigan Partners of the Americas and member, executive committee, National Legislative Black Clearing House.

Joseph Forbes (D-Oak Park) is Democratic House Majority Leader. He is in his third legislative term and previously was on the Southeastern Michigan Council of Governments; president, Michigan Conference of Mayors; board member, Michigan Municipal League and Oakland County, and mayor and councilman, Oak Park.

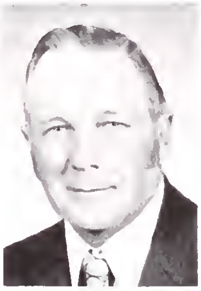


Thomas H. Brown, (D-Westland) is Majority Caucus Chairman and in his third term. He was first mayor of Westland, a former member of the Wayne County Board of Supervisors. He has been active in Westland civic organizations and Boy Scouts and has a background in business.

Dennis O. Cawthorne (R-Manistee) is new House Minority Leader. An attorney, he was first elected to the Legislature in 1966. He is former Minority Floor Leader. Previously, he was a college instructor, aide to Senator Robert Griffin, manager of the Mackinac Island Chamber of Commerce, newspaper reporter, police officer, salesman and laborer.

William R. Bryant, Jr., (R-Grosse Pointe) is new Republican Floor Leader. He is an attorney and former member of the Wayne County Board of Commissioners. He was first elected to the House in 1970.

Dan Angel (R-Marshall) is Republican Whip in the House. He is serving his second term and prior to his election was continuing education director at Albion College. He holds a PhD from Purdue University.



Harry Gast, Jr., (R-St. Joseph) was elected Republican Caucus Chairman for this legislative session. Gast, a fruit grower from Berrien County, first was elected to the House in 1970.

Key Committee Heads

Dominic J. Jacobetti, (D-Negaunee) is chairman, House Appropriations Committee. He has served in the legislature since 1954. He is active in civic organizations, is former sales representative and has actively supported programs to promote the Upper Peninsula.

Raymond W. Hood (D-Detroit) is chairman, House Public Health Committee. He is serving his sixth term and is former majority whip. He serves on the executive committee, Black Caucus, Democratic National Convention, and is a member of the NAACP, ACLU, Society of State Legislators, 1st Congressional District Democratic organization and New Detroit Committee.

Attorney General Limits Generic Drug Substitution

By Sherry L. Hall
MSMS Government Relations Department

Michigan Attorney General Frank Kelley has restricted the circumstances under which a pharmacist may substitute a generic drug for the brand-name drug prescribed. The opinion, dated Feb. 5, states that a pharmacist may not substitute unless the purchaser specifically requests a generic or unless the prescriber has authorized the substitution.

The opinion was sought in order to clarify issues contained in Public Act 155 of 1974, commonly referred to as the "Drug Substitution Bill," which becomes effective April 1.

Requested by Senator Dale Kildee (D-Flint) and Robert R. Eldredge, Executive Secretary of the Board of Pharmacy, the opinion addressed two questions dealing with (1) a clarification of the statutory provisions under which a prescriber may prevent dispensing of a generically equivalent drug product by the pharmacist and (2) whether a pharmacist may dispense a generically equivalent drug product in the absence of a request by the purchaser.

"DAW" Prevents Substitution

In describing how a prescriber may prevent generic substitution, the initials "DAW" are essential. "DAW" stands for "Dispense as Written" and when they appear on a prescription, prohibit a pharmacist from dispensing any product other than what has been ordered.

The initials "DAW" must be in the prescriber's handwriting. Doctors cannot use a simple "box" checkoff on the prescription as a means of prohibiting generic substitution. If a doctor's prescription blanks contain the preprinted statement, "Another brand of generically equivalent drug product, identical in dosage, form and content of active ingredients, may be dispensed unless initialed 'DAW'," and the initials are not written, this is a clear authorization to the pharmacist that he may substitute.

In telephone prescriptions, the pharmacist is prohibited from making a substitution if the doc-

Substitution Allowed By Pharmacist

1) The prescriber has not exercised the power to mandate that the prescription be dispensed as written,

and

2) The purchaser has requested that a lower cost generically equivalent drug be dispensed,

and

3) The generic drug product in fact has a lower total price than the brand-name drug originally prescribed. (A higher priced generic may be dispensed only if the purchaser agrees to pay the higher price.)

OR

The prescriber has authorized the pharmacist to substitute by not writing "DAW" following the preprinted statement on the prescription: "Another brand of generically equivalent drug product identical in dosage, form and content of active ingredients may be dispensed unless initialed 'DAW'."

Substitution Prohibited By Pharmacist

1) The prescriber has mandated that the prescription be dispensed as written by:

a) Writing "Dispense as Written" or "DAW" or

b) Writing "DAW" following a preprinted statement on the prescription, "Another brand of generically equivalent drug product, identical in dosage, form and content of active ingredients, may be dispensed unless initialed DAW." or

c) Telephoning the prescription to the pharmacist and expressly indicating that the prescription is to be dispensed as communicated.

OR

2) The purchaser has not requested that a generic drug be dispensed in place of the brand-name drug prescribed.

Michigan's Lt. Gov. James Damman, left, had luncheon with the first of MSMS's 1975 Doctors of the Week. Robert Toteff, MD, Saginaw, and Mrs. Toteff began their four-day Lansing visit with the meeting at Lansing's City Club.

MSMS Doctors of the Week In Lansing Again

The Michigan State Medical Society's "Doctors of the Week" are enlisted preceding each legislative session in Lansing. There are 20 so that every week of the 20-week session, a new physician volunteer may spend Tuesday-Friday learning more about the legislative process.

The Doctor of the Week attends committee meetings, listens to discussion on the floor and meets with legislators. He helps explain MSMS positions on current legislative issues and is a ready "expert" on medical affairs.

Each doctor comes to Lansing without his black bag or prescription pad. He does not practice medicine while here: Ingham County physicians make a special effort to see legislators needing medical attention.

The MSMS Doctor of the Week program was initiated in 1970 and has been enthusiastically received by physicians and legislators alike. To begin the spring, 1975 session, Lansing Mayor Gerald R. Graves proclaimed Feb. 3-7 as "Doctor Robert J. Toteff Week" in honor of the program.

Following is the list of 1975 spring session Doctors of the Week:

Feb. 4-7, Robert J. Toteff, MD, Saginaw;
Feb. 12-15, Donald Blain, MD, Mt. Clemens;
Feb. 18-21, Earl Williams, MD, Grand Rapids;
Feb. 25-28, James J. Gibbons, MD, Flint;
March 4-7, William Jones, MD, Allen Park;
March 11-14, Eber Sherman, MD, Eaton Rapids;
March 18-21, Thomas Berglund, MD, Kalamazoo;
March 25-28, Charles Willison, MD, Midland;
April 8-11, Edward Turner, MD, Detroit;
April 15-18, Joseph Cooper, MD, Bangor;
April 22-25, Frederick Engstrom, MD, Dearborn;
April 29-May 2, Richard Heuschele, MD, Saginaw;
May 6-9, W. S. Jones Jr., MD, Menominee;
May 13-16, John P. Newton, MD, Grand Rapids;
May 20-23, Raymond J. Winfield, MD, Marlette;
May 27-30, Robert Paxton, MD, Fremont;
June 3-6, Daniel Mazzuchi, MD, Marquette;
June 20-13, Reuven Bar-Levav, MD, Detroit;
June 17-20, John J.H. Schwarz, MD, Battle Creek, and
June 24-27, William Hobbs, MSU Medical Student, Flint.

SUBSTITUTION/*Continued*

tor indicates that the order is to be filled only with the brand-name drug as specified.

The Consumer Must Ask For the Generic

The attorney general ruled that a pharmacist may not make a generic substitution if the consumer does not specifically request him to do so. The only exception to the consumer request is when the doctor has authorized the substitution by not writing "DAW" following the preprinted statement, "Another brand of generically equivalent drug product, identical in dosage, form and content of active ingredients, may be dispensed unless initialed 'DAW'." Since absence of "DAW" following the preprinted statement is clear authorization to substitute, doctors should carefully consider the wisdom of printing the statement on their prescription forms. When the doctor is confident that a generically equivalent drug will achieve the desired therapeutic effect, he may advise his patient to request the pharmacist to dispense a generic product. The doctor cannot indicate to the pharmacist that a substitution is allowed by checking a box marked "May Substitute Generically."

The attorney general's opinion precipitated adverse comment from consumer advocates who charged that Mr. Kelley had "put a hurdle in the process of generic substitution" by requiring the consumer to request a generic product. Supporters of the drug substitution law indicate that legislative proposals will be introduced to remove the necessity of a consumer request prior to substitution. Copies of the law, Public Act 155 of 1974, and the attorney general's opinion may be obtained from MSMS.

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***IMPORTANT INFORMATION:** This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.*

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.

Dosage and administration: ***Lomotil is contraindicated in children less than 2 years old.*** Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid*, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

SEARLE **Searle & Co.**
San Juan, Puerto Rico 00936

Address medical inquiries to:
G. D. Searle & Co.
Medical Department, Box 5110,
Chicago, Illinois 60680

454 R

When diarrhea has his number...

37
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12
1
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Lomotil puts him back in the game.

Physicians and patients both want prompt control of the symptoms of diarrhea. A rapid, uncontrolled loss of fluids and electrolytes can cause a medical crisis, particularly in children, and in patients who are seriously ill, or in people who are badly undernourished.

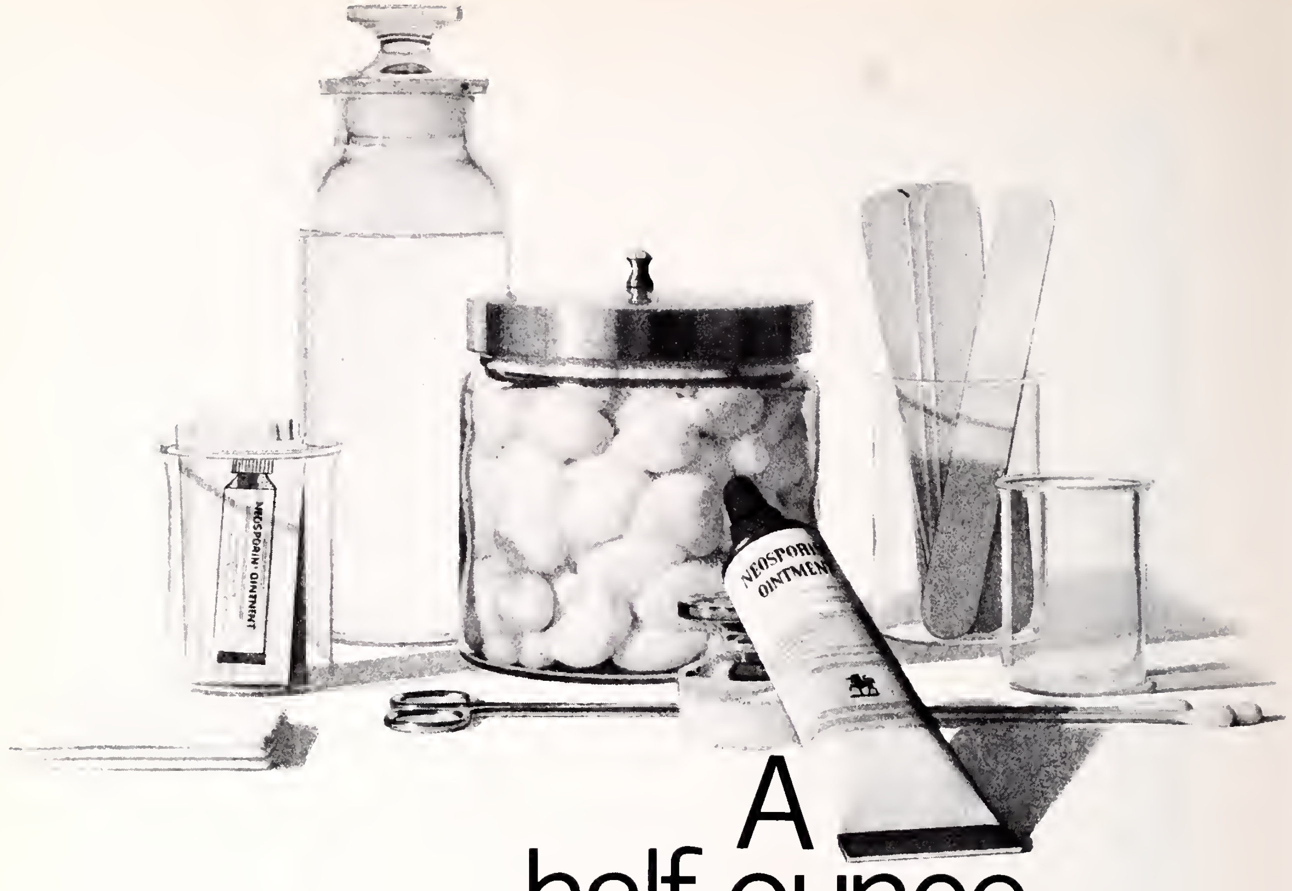
Lomotil usually stops diarrhea promptly. This rapid action halts the emergency aspect of diarrhea and is comforting and reassuring to the patient. Electrolyte and fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate antibiotic therapy should be given along with Lomotil.

Lomotil has few side effects, and those that do occur are generally mild.

Lomotil®
TABLETS/LIQUID

Each tablet and each 5 ml. of liquid contain:
diphenoxylate hydrochloride ...... 2.5 mg.
(Warning: May be habit forming)
atropine sulfate .... 0.025 mg.

Usually stops diarrhea promptly.



A half-ounce of prevention

Use it to prevent a topical infection. Or to treat one that's already started.
In either case, it's good medicine. Whether for lacerations,
burns, open wounds, IV catheter or surgical aftercare.
Neosporin® Ointment provides broad antibacterial coverage against common
susceptible pathogens. And since it contains three antibiotics that are
rarely used systemically, the risk of sensitization is reduced.
Neosporin Ointment. A half-ounce of prevention. Also available in a
full ounce of prevention and in convenient foil packets.

Neosporin Ointment carried on Apollo and Skylab missions.

Neosporin® Ointment
(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units;
neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs.
In tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: *Therapeutically,* used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa
- primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis)
- traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently** — both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F CO.
Carolina, P.R. 00630
Subsidiary of
SmithKline Corporation

KEEP THE HYPERTENSIVE PATIENT ON THERAPY KEEP THERAPY SIMPLE WITH

DYAZIDE®

Trademark

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

Neither inconvenient potassium supplements nor special K^+ rich diets needed as a rule. Just 'Dyazide' once or twice daily for maintenance.

20
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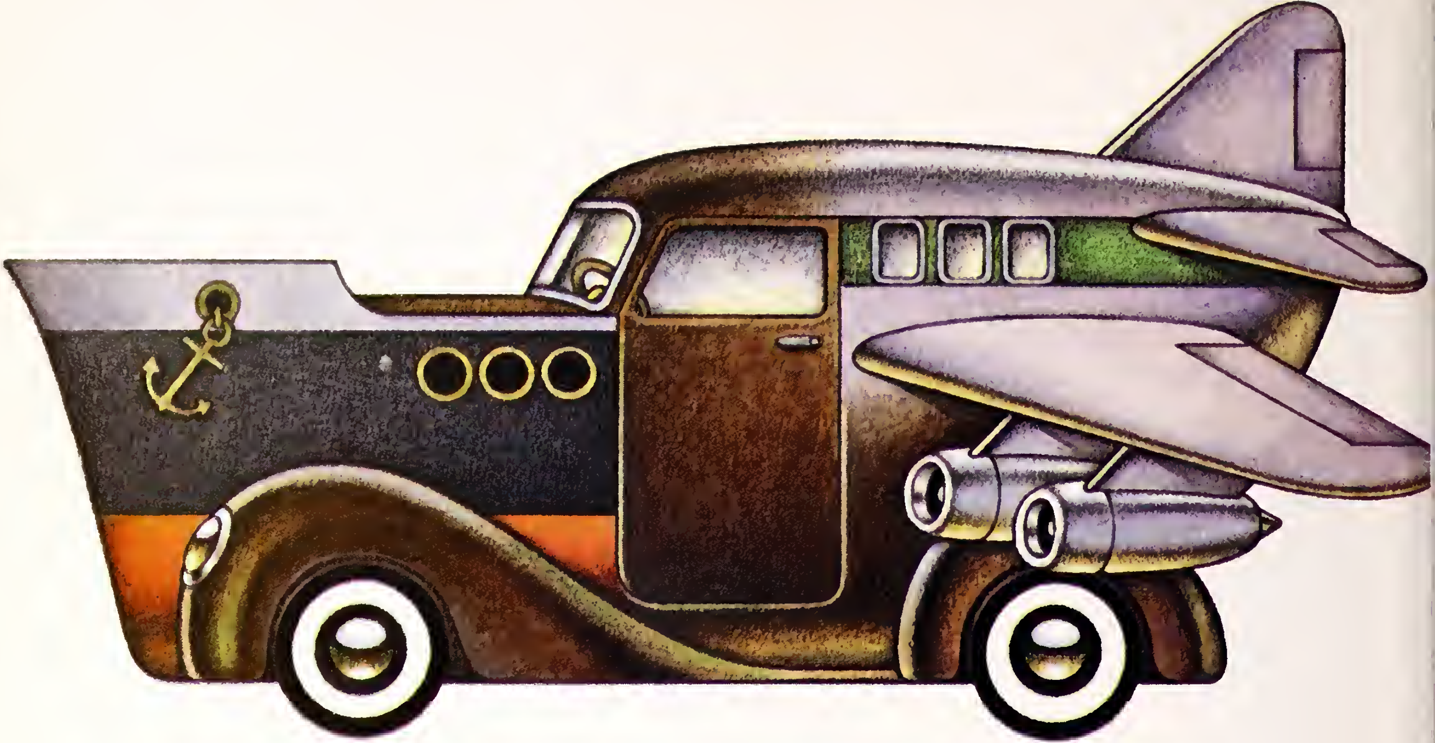
Two prime reasons patients drop out of hypertensive therapy are (1) the patient failed to understand directions, and (2) the regimen was overly complicated. Dosage is simple with 'Dyazide', easily understood, once or twice daily, depending on response. There's no need to complicate the regimen with potassium supplements or unwieldy potassium-rich diets.

TO KEEP BLOOD PRESSURE DOWN AND KEEP POTASSIUM LEVELS UP



On land, sea, and in the air...

Up to 24 hours of effective control with a single dose...in nausea, vomiting and dizziness associated with motion sickness.

Dosage: 25 to 50 mg. 1 hour before travel.
Available on prescription only.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25 Chewable Tablets
(meclizine HCl) 25 mg.
for motion sickness

State Legislation on Medicine, Health – Here are Bills Introduced as of Feb. 26

The following is a brief resume of state legislation introduced along with the names of chief sponsors, as of Feb. 26, 1975:

Bills Dealing with Malpractice

HB 4117, Rep. Vaughn; Establishes procedure to appoint pretrial panel to review suits; determine if claim is valid; if arbitration should be tried, or trial.

HB 4118, Rep. Vaughn; Blue Cross/Shield and HMO subscriber contracts will require subscriber to submit claim to arbitration.

HB 4123, Rep. Defebaugh; State will hold mental health employee harmless for financial loss caused by suit for alleged negligent acts within scope of duty.

HB 4282, Rep. Angel; Requires malpractice insurance carriers to submit regular reports required by Insurance Commissioner.

HB 4283, Rep. Angel; Restricts fees attorney may collect in malpractice cases.

HB 4284, Rep. Angel; Casualty insurers for doctor malpractice insurance shall offer policies containing loss deductibles.

HB 4285, Rep. Angel; If civil action in malpractice is under $10,000, the court shall remand the action for binding arbitration and name the arbitrator.

HB 4286, Rep. Angel; Limits recovery in malpractice cases to the maximum amount prescribed by Rules of the Insurance Commissioner.

HB 4287, Rep. Angel; Plaintiff in malpractice suit faces Statute of Limitations of 3 years, from time plaintiff discovers or otherwise has knowledge of the claim.

HB 4288, Rep. Angel; Carriers selling malpractice insurance in Michigan must develop loss prevention programs.

HB 4326, Rep. Vaughn; Extends immunity of doctors under Good Samaritan Act to emergency service rendered.

HB 4349, Rep. Kok; Prescribes information which malpractice insurance carriers must report to Insurance Commissioner; confidentiality protected.

HR 15, Rep. Geerlings; Creates a special committee to investigate the problems associated with the lack of availability of malpractice insurance.

SB 182, Sen. Plawecki; Under workmen's compensation an injured party accepts that the payments he received are the "single remedy" for his injury. This bill would allow him to sue for malpractice which previously had been prohibited under this concept.

SB 227, Sen. Ziegler; Malpractice suits must be brought within the Statute of Limitation period (2 years), excepting minor children and military service.

SB 230, Sen. Ziegler; Would require that a lawyer file a Certificate of Merit when bringing a malpractice suit; establishes criteria for the contents of any malpractice suit.

SB 242, Sen. Cooper; Creates the Michigan Medical Liability Insurance Placement Facility through which any doctor who cannot get regular insurance will be insured.

Bills Not Concerned With Malpractice

HB 4019, Rep. J. Smith; Would require a freshman medical student as a condition of admission to a Michigan school to practice in the state two years.

HB 4061, Rep. J. Young; Creates a Board of Trustees in Wayne County to establish, maintain and operate a comprehensive county hospital, health, and allied medical service program to provide health care services.

HB 4063, Rep. J. Young; A partial substitute for Governor's Super Agency Bill, it would create a one year agency to coordinate delivery of social, health, educational, and counseling services.

HB 4064, Rep. Harrison; and **HB 4158,** Rep. Markes; Ban smoking in public places.

HB 4097, Rep. McNeely; Reduces time from 60 to 10 days when injured worker under workman's comp can exercise "physician of choice."

HB 4103, Rep. McNeely; Would expand the present reporting requirements for suspected occupational diseases.

HB 4125, Rep. Bennett; Bans the sale and use of aerosol sprays containing vinyl chloride after 12-/31/75.

HB 4140, Rep. Bullard; Physician-patient privilege is extended to inmate-corrections treatment personnel communications.

HB 4141, Rep. Bullard; Repeals act banning prophylactic sales and displays by non-pharmacists.

HB 4142, Rep. Bullard; When an individual is laid off the MESC would continue to pay his medical insurance even past the expiration date.

HB 4189, Rep. Stopczynski; Prohibits use of live human fetus for experimental purposes.

HB 4214, Rep. Kehres; Redefines and broadens conditions which must be reported and persons obligated to report injuries to children. DSS has specific investigatory responsibilities.

HB 4235, Rep. J. Smith; Redefines "person requiring treatment" to mean a person who is afflicted with a mental disease or a mental condition which is manifested by a disorder or disturbance in behavior, feeling, thinking or judgment to such an extent that the person requires care and treatment. Would allow for detention up to 72 hours and for rights of counsel.

HB 4317, Rep. Geake; Controls and defines the type of pathogenic which can be shipped.

HCR 18, Creates a special study committee to examine the potential of making better use of the talents and skills of the physically handicapped or physically hindered. (adopted 2/10/75)

HR 24, Rep. Harrison; Creates a special committee to make a study relative to experimental approaches in the treatment of mental diseases and disturbed behavior.

SB 12, Sen. Kildee; Would require coverage under disability policies of children with diagnosed congenital defects and birth abnormalities.

SB 39, Sen. McCollough; and **SB 54,** Sen. Faxon, Ban smoking in public places.

SB 78, Sen. VanderLaan; Would create a catastrophic illness and injury fund, under the Department of Public Health.

SB 102, Sen. Faxon; The Director of the Public Health Department may in anticipation of an epidemic control the distribution and merchandising of the material and manufacture of substances needed to control the problem.

SB 103, Sen. Faxon; Requires a local school district to implement a comprehensive health education curriculum in elementary and secondary schools.

SB 104, Sen. Faxon; Sets procedure to ensure due process for criminal sexual psychopaths for whom psycho-surgery is planned.

SB 129, Sen. Guastello; Would require all health care plans to cover child from moment of birth including necessary care and treatment of medically diagnosed congenital defects and birth abnormalities.

SB 151, SB 152, Sen. Plawecki; Control and regulate blood banks.

SB 165, Sen. Kildee; Makes major changes in workmen's comp law including allowing for immediate free choice of physician.

SB 181, Sen. Plawecki; and, **SB 199,** Sen. Otterbacher; Redefine total loss of hearing and permanent serious disfigurements under workmen's comp.

SB 249, Sen. Otterbacher; If expectant mother consents, natural father may be present in hospital delivery and labor room during all stages of childbirth.

SB 257, Sen. Otterbacher; Defines and regulates ambulances.

SB 258, Sen. Otterbacher; County-district boards of health have same power and duties of local health departments.

SB 261, Sen. Otterbacher; Creates a renal disease control program within the State Department of Public Health.

SB 262, Sen. Otterbacher; Authorizes Blue Cross and other non-profit hospitals to contract with mental hospitals licensed by Department of Mental Health.

SB 266, Sen. Otterbacher; Same as HB 4214 regarding reporting injured children.

SB 270, Sen. Otterbacher; Extends to 24 months the liability period for which medical care services may be paid for under Medicaid.

SB 287, Sen. Faust; Deletes ban on marriage between first cousins.

SR 22, Creates a special study committee to investigate family health care services and costs. (adopted)

SCR 39, Creates a special study committee to investigate and study youth sports activities, particularly the medical and legal problems of these programs.

Michigan's New Mental Health Code Takes Positive Steps in Care of Mental Patients

By Jack M. Stack, MD
Alma

In recent months there has been a great deal of discussion about Michigan's new Mental Health Code and recent court rulings on the mentally ill.

This debate has taken place in the press, in court rooms, hospitals, medical meetings and legislative halls. Some elements of our medical and legal systems seem to have been nearly immobilized by overloads, apprehension, incomplete understanding or overinterpretation of the new code.

Although we recognize that there are minor flaws or deficiencies in the court rulings and new mental health code, we believe that these recent developments can be seen as major positive steps in the care of the mentally ill and mentally retarded.

We do not have the option of returning to our old commitment laws. They have been declared unconstitutional by a Federal district court in Bell vs. Wayne County General Hospital.[1] The U.S. District court ruling declared Michigan's old law unconstitutional and a violation of due process of law insofar as those provisions failed to require:

"(1) That a copy of the petition for civil commitment be served on the person alleged to be mentally ill.

"(2) That notice of a civil commitment proceeding be served on the person alleged to be mentally ill sufficiently in advance of the hearing to permit adequate preparation.

"(3) That advice of the right to counsel, the right to appointed counsel in cases of indigency, and advice of all other rights afforded by Michigan statutes be given at the outset of the commitment proceedings.

"(4) That the person whose commitment is sought be present at the commitment hearing. If it is alleged that it would be improper and unsafe for an allegedly mentally ill person to appear in the committing court, the court must consider alternate methods of conducting the hearing and may only exclude the allegedly mentally ill person where that person's conduct becomes so disruptive that the proceeding cannot continue in any reasonable manner.

"(5) That involuntary commitment be permitted only upon the demonstrated existence of a mental illness that causes such a person to present an imminent threat of physical harm to himself or to other persons.

"(6) That when a person is involuntarily detained prior to any judicial hearing, such detention shall not continue unless a prompt preliminary hearing is held at which hearing it is determined that there is probable cause to believe that the person is mentally ill, is dangerous to himself or others, that continued confinement is necessary" and that due process shall be followed as outlined above.

It is important to point out that the court was rendering its opinion on the unconstitutionality of the diagnostic orders under which a person was held in a state hospital for 60 to 120 days without due process and without adjudication of mental illness requiring such involuntary incarceration.

In its summary judgement the court specifically stated it "makes no findings regarding the constitutionality of the emergency detention proceedings."

The Court stated that the commitment laws — the 60-day diagnostic orders, not the emergency detention procedures — violate the constitutional right of due process as they permit involuntary surgery, shock treatment and chemotherapy prior to a final adjudication of mental illness. They stated that chemotherapy shall not be administered to an individual until after final adjudication unless the individual consents to such chemotherapy or unless the administration of such chemotherapy is necessary to prevent physical injury to the individual or others.

Anticipating the concern of the professions regarding treatment, the court specifically did not rule against our emergency detention procedure and they stated, "Nothing in this order shall be

Doctor Stack

Doctor Stack is a family physician and medical director, Gratiot Community Mental Health Center; vice president, Michigan Society for Mental Health, and member, Michigan Mental Health Advisory Council.

construed as a finding or a declaration that it is unconstitutional to involuntarily treat a person who has not been finally adjudicated as mentally ill, but who in the professional judgement of a *physician* appears to be in immediate need of treatment in order to prevent him from physically harming himself or others, providing such treatment is necessary to maintain physical health."

The new Mental Health Code conforms to these guidelines.

Many claim that these changes brought about by the new code were not necessary to protect the civil liberties of our people but we need only to refer to the Luby Study of Commitments in Oakland County to document the regular avoidance of the most rudimentary elements of due process.[2] In addition, one can review many cases of patients who required institutional care years ago only to find that they are now chronically disabled as a result of long term institutionalization, the original reasons for which have long been forgotten.

It is imperative that physicians understand that neither the code nor the court ruling relieves us of our medical responsibilities to diagnose and treat patients who require our care. Both the court ruling and the law specifically allow chemotherapy if the patient consents or if necessary to prevent physical injury to the individual or others.

We believe that patients have a constitutional right to adequate treatment. We agree with the official position of the American Psychiatric Association on the issue of involuntary hospitalization of the mentally ill which reads, in part, as follows: "Unfortunately, a small percentage of patients who need hospitalization are unable, because of their mental illness, to make a free and informal decision to hospitalize themselves. Their need for and right to treatment in a hospital cannot be ignored. In addition, public policy demands that some form of involuntary hospitalization be available for those mentally ill patients who constitute a danger either to themselves or to others."[3]

In these cases of serious mental illness we believe that the right to treatment becomes paramount to any absolute right to liberty and that the humane benefits of treatment will help the patient regain a more meaningful liberty as soon as possible.

Most patients however who are brought to the hospital for admission by medical certification will give consent for treatment if approached in a persuasive, positive, humane and caring way. We believe that a reasonable range of treatment can be initiated during the first five days of involuntary admission by a competent and caring staff. Certainly providing room, warmth, food, good sanitation, a reasonable range of freedom, and psychotherapy can be offered to any involuntary patient during the early period of hospitalization.

The new commitment procedures outline how to detain a person for examination and how to admit the person on emergency five-day admission by petition for medical certification. The statute requires notice of hearings, the right to counsel, the right to be present at the hearings, the right to use the telephone and to communicate. The new code also allows treatment with chemotherapy while a person is under the hold order if the person consents or if necessary to prevent injury. Restraint or seclusion of a patient is permitted if necessary to prevent the person from physically harming himself or others or to prevent substantial damage.

Some complain about the clauses in the court ruling and new law which require legal counsel. They complain that the lawyer with no formal training in mental health would have no insight into and consideration for the needs of the emotionally disturbed. Allow us to point out, however, that in the past we had to pay an attorney's fee for filing the petition for commitment. The attorney represented the petitioner, not the patient. Now any citizen can file the petition and the attorneys are being properly used — to provide "the assistance of counsel to cope with problems of law, to make skilled inquiry into the facts, to insist upon regularity of proceedings, and to ascertain whether he has a defense and to prepare and submit it."[3]

In addition to the due process rules the new statute contains over 20 rights to be guaranteed to the recipients of mental health services including the right to mental health services suitable to his condition, the right to periodic exam and to communicate by phone and mail. The code has specific limitations on involuntary surgery, electroconvulsive therapy, physical restraint and seclusion. It also guarantees the right to free public education and creates a patient advocacy system.

In Chapter 4 of the new code, Civil Admission and Discharge Procedures for Mental Illness, Section 401a defines a "person requiring treatment" as "a person who is mentally ill, and who as a result of that mental illness can reasonably be expected within the near future to intentionally or unintentionally seriously physically injure himself or another person, and who has engaged in an act or acts or made significant threats that are substantially supportive of the expectation."

Although this definition conforms to the court ruling, criticisms have been made about the limitations of the definitions of a "person requiring treatment" by involuntary admission. It is alleged that these definitions are too restrictive, that we can't intervene until the patient becomes violent — suicidal or homicidal. We do not agree. We believe that this is an overly concrete interpretation of the law. We do not believe that the Legislative intent, the spirit of the law nor our citizens' needs are being served best by assuming that we must wait until the patient is in the jaws of death and if successful, rescue him at the last minute.

In addition, Section 401b defines a "person requiring treatment" as "a person who is mentally ill and as a result of that mental illness is unable to attend to those of his basic physical needs such as food, clothing, or shelter, that must be attended to in order for him to avoid serious harm in the near future, and who has demonstrated that inability by failing to attend to those basic physical needs."

We believe that Section 401b can be used with a reasonably liberal interpretation. Its addition to the law has increased our capability to deliver treatment services. We believe that if a person's cognition, judgement or orientation is so impaired (by delusions, hallucinations, manic behavior, a deep depression, etc.) that he cannot provide for these needs without regular intense action by his family or friends and they are unable to provide for him because they are frightened or fatigued, one can use this clause which need not be considered as a last resort, the end of the line, or a final statement.

We are told that many physicians will not participate under the new law by examining, treating, and certifying patients for fear of a malpractice suit and because of the inconvenience of the court hearings.

We see nothing in the new law nor in the Bell case that tells a physician to stop acting like a physician nor tells lawyers how to practice medicine!

We believe that physicians should proceed to function in an appropriate medical manner and that to withhold the kinds of treatment that we have cited, e.g., chemotherapy and psychotherapy might be far more subject to malpractice than to proceed to diagnose and treat.

Regarding the question of inconvenience, at least one probate judge has agreed to hold morning court hearings at the local hospital when physicians ordinarily make rounds and can testify at a time and place more convenient for them. This move has been most helpful.

There are undoubtedly changes and improvements which can be made in the new law. In a Senate hearing on the Mental Health Code on February 10, 1975 we asked the Legislature to change the Code by enacting an immunity clause and by eliminating the requirement that the physician must testify.

We recommended an immunity clause for physicians, police officers and hospital and mental health personnel who participate in the process of admission by petition and medical certification.

We recommend wording such as in the Juvenile Code. "Any person acting in good faith who makes a report, or in good faith assists in any other requirement of this Act shall be immune from any civil or criminal liability which might otherwise be included thereby. Any person making or assisting in the making of the report shall be presumed therefore acting in good faith. This immunity from civil or criminal liability extends only to acts done pursuant to the provision of this Act (258) and does not extend to negligence which causes personal injury or death."

We should try to keep uppermost in mind that the goal of the initial contact with our patients is not the administrative processing of a person predestined to become an inpatient. Rather it requires an understanding by staff, patient, family, and community that the patient's problems in living are such that help is needed and a dedication by all parties to participate in seeking relief and restoration of health.

Some complain that the new code follows the criminal law rather than a medical model, that we have created an adversary system. Many of us would prefer to see the new law become an advocacy system for the patient. The success of the new system can result in an increase of voluntary and contractual psychiatry with most patients receiving care from private and community services in community facilities. One of the most important changes in the present commitment procedure is the requirement that alternatives to state hospitalization be reviewed by the court and when desirable the patient can be ordered to treatment programs in local hospitals, mental health centers, day care facilities, nursing homes or outpatient clinics.

In the interest of our patients we must encourage physicians to engage in the care of the involuntary patient. We must ask our lawyers, judges, physicians, and mental health workers to talk to each other and develop agreeable systems for dealing with these problems within the new law. Then we can move into a new era of aggressive, patient-oriented, humane, community-based care, protecting the patient's right to treatment and due process and serving him, his family and the community.

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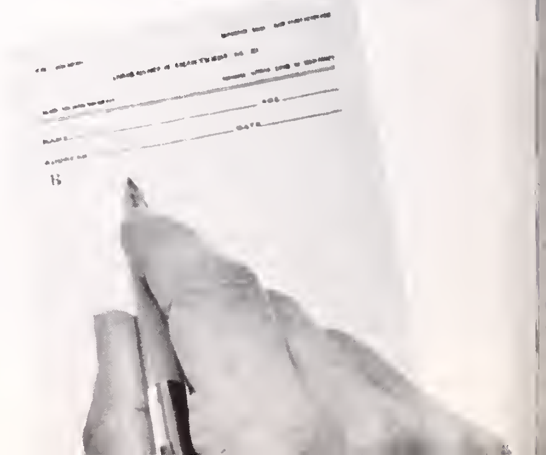
Bioequivalence



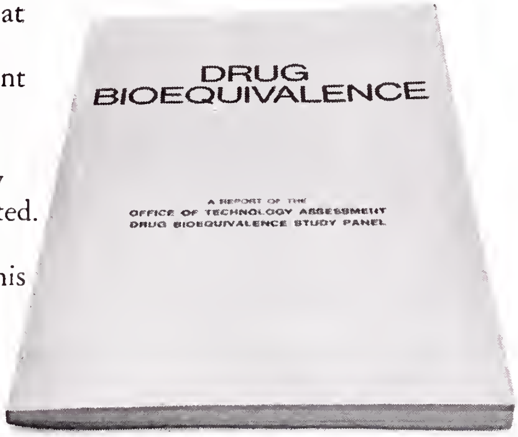
the weight of scientific opinion:

If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that product's safety and effectiveness simply because the chemical content was the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalency in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.


DRUG
BIOEQUIVALENCE
A REPORT OF THE
OFFICE OF TECHNOLOGY ASSESSMENT
DRUG BIOEQUIVALENCE STUDY PANEL

"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and (b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or (c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...

P·M·A

Pharmaceutical Manufacturers
Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

protecting the integrity of your prescription

PEOPLE

Duane Block, MD, Dearborn,

is 1975 president of the Michigan Health Council. Doctor Block is medical director of the Ford Motor Co.

Charles F. Frey, MD, of Ann Arbor,

has been named chief of Section V of the Regional Trauma Organization of the American College of Surgeons. He formerly was chairman of the Michigan Committee on Trauma and during his tenure organized the Michigan Emergency Health Service Council. Doctor Frey is professor of surgery at U-M and director of surgery for Wayne County General Hospital.

Roy J. Gerard, MD, Saginaw,

is first chairman of the new Department of Family Practice of Michigan State University's College of Human Medicine. Doctor Gerard has been a family physician since 1955 and director of the family practice residency program at Saginaw Cooperative Hospitals, Inc.

Jacques S. Gottlieb, MD, Detroit,

recently retired as director of the Lafayette Clinic, will be honored with a special program April 17 of the Michigan Psychiatric Society. Afternoon and evening sessions will be devoted to tributes to Doctor Gottlieb, who has headed the clinic for years, and to discussions of schizophrenia. Doctor Gottlieb has won international recognition for his research into the mental disorder.

William R. Harlan Jr., MD, Ann Arbor,

is new chairman of the U-M Department of Postgraduate Medicine and Health Professions education. Doctor Harlan, who assumed new duties Dec. 1, has been professor of medicine and community health services at Duke University.

Jay K. Harness, MD, Ann Arbor,

chief resident surgeon at University Hospital, is national chairman of the AMA Interns and Residents Section.

Mary E. Hawthorne, PhD,

graduate of Michigan State University, is serving as interim director of the Western Michigan University Physicians' Assistants Program. Director John J. Josten, PhD, was seriously in-

(Continued page 164)

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In fact, there are no known contraindications to the use of Vasodilan in recommended oral doses, other than that it should not be given in the presence of frank arterial bleeding or immediately postpartum.

[1] Gertler, M. M., et al.: Geriatrics *25*:134-148 (May) 1970.

Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Adverse Reactions: On rare occasions, oral administration of the drug has been associated in time with the occurrence of severe rash. When rash appears, the drug should be discontinued. Occasional overdosage effects such as transient palpitation or dizziness are usually controlled by reducing the dose.

Supplied: Tablets, 10 mg.—bottles of 100, 1000, 5000 and Unit Dose; 20 mg.—bottles of 100, 500 and Unit Dose.

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jured in a recent auto accident. Doctor Hawthorne is former assistant director of the Study of Allied Health Education of the American Association of Community and Junior Colleges.

Morton S. Hilbert, Ann Arbor,

is new president-elect of the American Public Health Association. Doctor Hilbert is professor and chairman of the Department of Environmental and Industrial Health at the University of Michigan School of Public Health.

Paul Hollister, MD, of East Lansing,

has been named medical director for professional services at Michigan State University's College of Human Medicine. Professional services receives patient referrals directed to clinicians on the faculty. A hematologist, Doctor Hollister is assistant professor of medicine.

Robert C. Horn, Jr., MD, Detroit,

is new president of the College of American Pathologists.

James J. Humes, MD, Detroit,

is new president of the American Society of Clinical Pathologists.

Ronald L. Krome, MD, Detroit

is new vice president of the American College of Emergency Physicians.

Eberhard F. Mammen, MD, Detroit,

is new dean of the WSU College of Pharmacy and Allied Health Professions. Doctor Mammen is former assistant dean for admissions for the WSU School of Medicine.

George R. Montante, MD, Orchard Lake,

is new national chairman of the alumni unit of Wayne State University's first fund-raising program, called "Decision for Wayne." Doctor Montante is a director, WSU School of Medicine, Oakland County commissioner, and staff member, Mt. Carmel Mercy Hospital.

Donald C. Overy, MD, Pontiac,

is new member of the American Heart Association board. He is past president of the Michigan Heart Association.

Richard D. Remington, PhD, Ann Arbor,

is new vice president for research of the American Heart Association. Doctor Remington is dean of the U-M School of Public Health.

William D. Robinson, MD, Ann Arbor,

newly-retired chairman of the U-M Department of Internal Medicine, was honored recently by some 500 physicians who attended a symposium in his honor at the university. They included past and present colleagues and physi-

(Continued page 166)

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The patient with gastritis:

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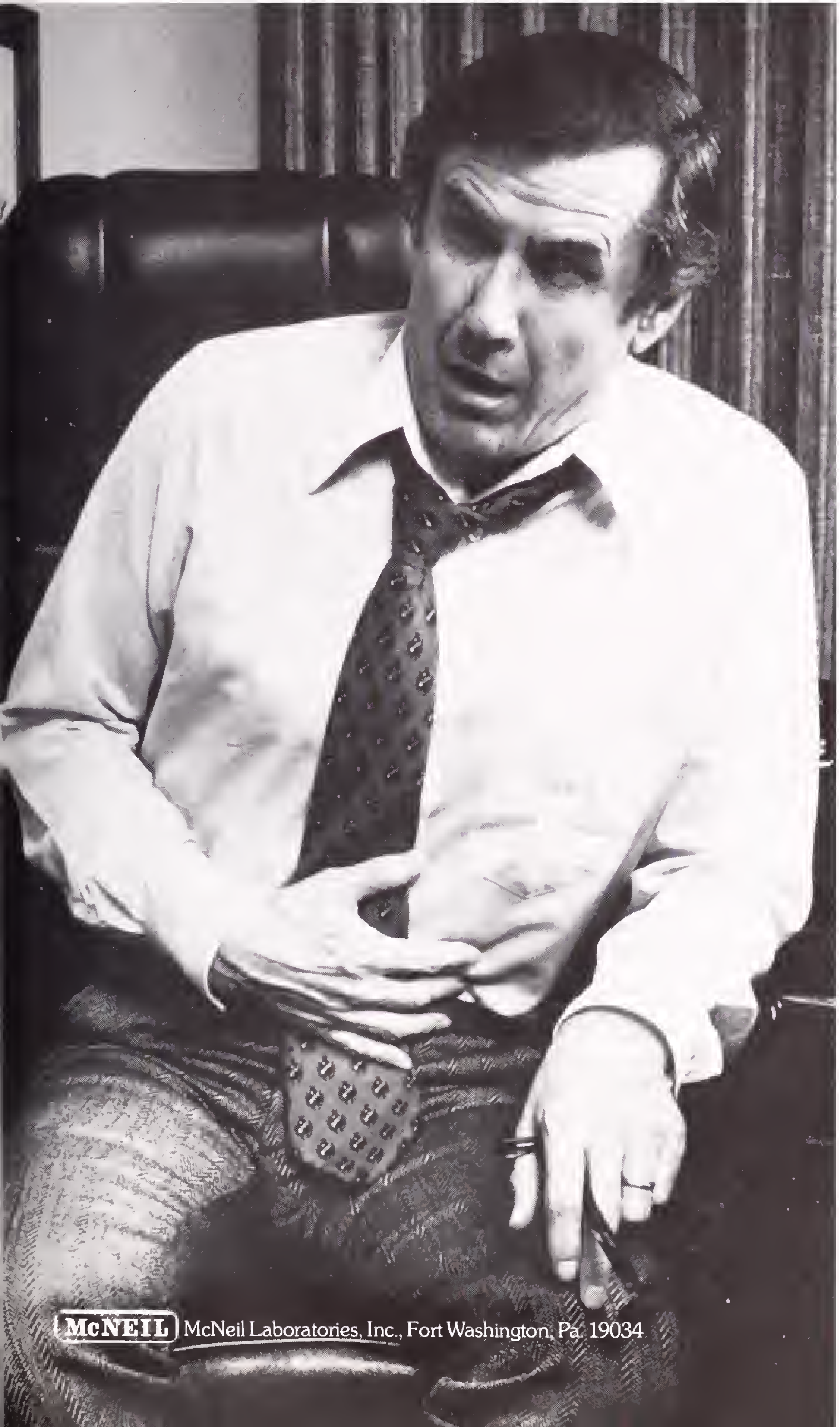

When the gastritis patient has a condition requiring an analgesic, a new problem arises. Aspirin's irritating effect on the gastric mucosa is well documented.[1-3]

TYLENOL analgesic tablets, on the other hand, are unlikely to cause local irritation,[2,3] which is why they are preferred in the patient subject to gastritis.

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Precautions and Adverse Reactions: If a rare sensitivity reaction occurs, the drug should be stopped. Acetaminophen has rarely been found to produce any side effects.

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cians trained by the department during Doctor Robinson's 40 years of service, 16 of them as head of the department. Eleven former members of the department who now are chairmen or professors of internal medicine at other institutions presented the symposium, which was followed by a banquet.

Ernst A. Rodin, MD, Detroit,

chief of neurology and electroencephalography at Lafayette Clinic, is current president of the American Electorencephalographic Society.

Robert Scherer, MD, Detroit,

is new president of the Michigan Allergy Society.

George W. Slagle, MD, Battle Creek,

is new vice president of the Michigan Association of the Professions. Doctor Slagle is former MSMS president and a candidate this year for vice president of the AMA.

William Stapleton, MD, Detroit,

celebrated his 98th birthday Christmas Day. A past president of the Wayne County Medical Society, Doctor Stapleton also has served many years as MSMS historian. He was designated Michigan's Foremost Family Physician in 1953 and also holds a law degree. Doctor Stapleton is still vigorous and just "going on vacation."

Thomas M. Sullivan, MD, Detroit,

is new assistant dean for admissions at WSU School of Medicine. He has been acting director of admissions since last February and also is an associate professor of psychiatry and head of the social and community psychiatry division of Lafayette Clinic.

C. Mark Vasu, MD, Grand Rapids,

cardiologist and pioneer of Michigan emergency medical care systems, is new chairman of the Michigan Emergency Services Health Council. He succeeds Charles Frey, MD, Ann Arbor, who has headed the organization since its founding in 1970.

Alexander J. Walt, MD, Detroit

is new vice president of the American Association for the Surgery of Trauma. Doctor Walt is chairman of general surgery at Wayne State University School of Medicine.

Arnold M. Weissler, MD, Detroit,

chairman of the WSU Department of Medicine, is new chairman of the Cardiovascular Board of the American Board of Internal Medicine.

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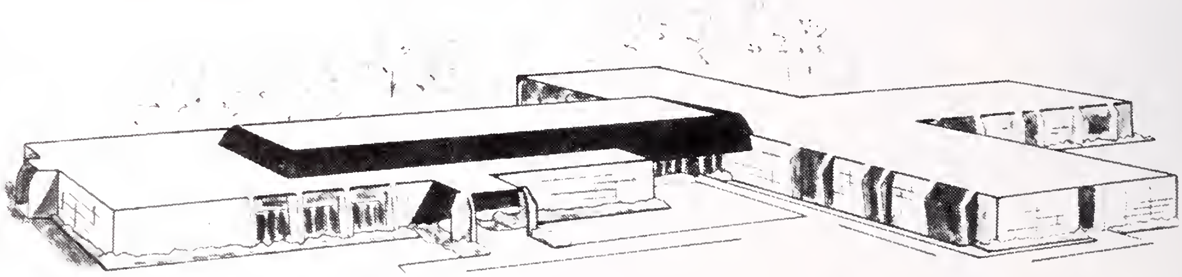

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Michigan Authors

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DESCRIPTION: Methyltestosterone is 17β-Hydroxy-17-Methylandrost-4-en-3-one. **ACTIONS:** Methyltestosterone is an oil soluble androgenic hormone. **INDICATIONS:** In the male: 1. Eunuchoidism and eunichism. 2. Male climacteric symptoms when these are secondary to androgen deficiency. 3. Impotence due to androgenic deficiency. 4. Postpuberal cryptorchidism with evidence of hypogonadism. Cholestatic hepatitis with jaundice and altered liver function tests, such as increased BSP retention and rises in SGOT levels, have been reported after Methyltestosterone. These changes appear to be related to dosage of the drug. Therefore, in the presence of any changes in liver function tests, drug should be discontinued. **PRECAUTIONS:** Prolonged dosage of androgen may result in sodium and fluid retention. This may present a problem, especially in patients with compromised cardiac reserve or renal disease. In treating males for symptoms of climacteric, avoid stimulation to the point of increasing the nervous, mental, and physical activities beyond the patient's cardiovascular capacity. **CONTRAINDICATIONS:** Contraindicated in persons with known or suspected carcinoma of the prostate and in carcinoma of the male breast. Contraindicated in the presence of severe liver damage. **WARNINGS:** If priapism or other signs of excessive sexual stimulation develop, discontinue therapy. In the male, prolonged administration or excessive dosage may cause inhibition of testicular function, with resultant oligospermia and decrease in ejaculatory volume. Use cautiously in young boys to avoid premature epiphyseal closure or precocious sexual development. Hypersensitivity and gynecomastia may occur rarely. PBI may be decreased in patients taking androgens. Hypercalcemia may occur, particularly during therapy for metastatic breast carcinoma. If this occurs, the drug should be discontinued. **ADVERSE REACTIONS:** Cholestatic jaundice • Oligospermia and decreased ejaculatory volume • Hypercalcemia particularly in patients with metastatic breast carcinoma. This usually indicates progression of bone metastases • Sodium and water retention • Priapism • Virilization in female patients • Hypersensitivity and gynecomastia. **DOSAGE AND ADMINISTRATION:** Dosage must be strictly individualized, as patients vary widely in requirements. Daily requirements are best administered in divided doses. The following is suggested as an average daily dosage guide. In the male: Eunuchoidism and eunuchism, 10 to 40 mg.; Male climacteric symptoms and Impotence due to androgen deficiency, 10 to 40 mg.; Postpubaral cryptorchism, 30 mg. **HOW SUPPLIED:** 5, 10, 25 mg. in bottles of 60, 250.

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Boy Frame, MD, Detroit, "Acute Regional Osteoporosis Following Minor Injury," page 1443, *Journal of the American Medical Association,* Dec. 9, 1974.

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Thomas J. Vecchio, MD, Kalamazoo, "How I Got Creamed by an Ice Cream Franchise," page 146, *Medical Economics,* Nov. 11, 1974.

F. A. Baughman, Jr., MD, J. V. Higgins, PhD; T. G. Wadsworth, MD, and M. J. Demaray, MD, Grand Rapids, "The Carrying Angle in Sex Chromosome Anomalies," page 718, *Journal of the American Medical Association,* Nov. 4, 1974.

A. Q. Mataverde, MD; A. A. Abbasi, MD; Z. Hossain, MD, and G. W. Bissell, MD, Detroit, "Hydrochlorothiazide-Induced Water Intoxication in Myxedema," page 1014, *Journal of the American Medical Association,* Nov. 18, 1974.

M. S. Zaman, MD, Dowagiac, "Giant Trichobezoar of Stomach," *Abdominal Surgery,* October, 1974.

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MEETINGS

March 18-20 – Postgraduate course in morphology of the blood and marrow, U-M Medical Center, Ann Arbor.*

March 26-27 – 1975 Annual Michigan Conference on Maternal and Perinatal Health, Civic Auditorium and Pantlind Hotel, Grand Rapids, contact: Helen Schulte, MSMS headquarters

March 31-April 2 – Ob-Gyn Conference, U-M Medical Center, Ann Arbor.*

April 1-5 – Tutorial session, clinical cardiology, Henry Ford Hospital, limited enrollment, contact: Sidney Goldstein, MD, Head, Division of Cardiovascular Disease, Henry Ford Hospital, Detroit 48202.

April 3-5 – Critical Care Symposium on Sepsis, sponsored by WSU Department of Surgery, Hotel Pontchartrain, Detroit, contact: Lynn E. Ernest, Symposium Coordinator, WSU School of Medicine, 540 E. Canfield, Detroit, 48201.

April 7-May 2 – Surgical Anatomy Review, U-M Medical Center, Ann Arbor.*

April 10 – Continuing Pathology Conference, "Diseases of the Placenta," U-M Medical Center, Ann Arbor.*

April 16 – Orthopedics in Family Practice, U-M Medical Center, Ann Arbor.*

April 17 – Spring Meeting, Michigan Psychiatric Society, honoring Jacques S. Gottlieb, MD, at Holiday Inn West, Ann Arbor, contact: Dean P. Carron, MD, 425 E. Washington St., Ann Arbor 48108.

April 17-18 – Course on medical technology/hematology, U-M Medical Center, Ann Arbor.*

April 18-19 – Symposium on Gynecologic Oncology, Royal Oak, contact: Ralph Margulis, MD, Department of Obstetrics-Gynecology, William Beaumont Hospital, Royal Oak 48072.

April 21-25 – American College of Physicians postgraduate course on recent progress in clinical endocrinology, co-sponsored by U-M Medical Center, at Towsley Center, Ann Arbor, contact: ACP, 4200 Pine St., Philadelphia 19104.

April 24-25 – International conference on andrology, "Human Semen and Fertility Regulation in the Male," at WSU School of Medicine, contact: E. S. E. Hafez, PhD, WSU School of Medicine, 540 E. Canfield, Detroit 48201

April 24-26 – Meeting of the Midwestern Association of Plastic Surgeons, Shiawassee Hotel, Southfield, contact: Burns Newby, MD, 20905 Greenfield, Southfield 48075

April 28-29 – Sixth Annual Scientific Continuing Pathology Conference, U-M Medical Center, Ann Arbor.*

April 28-29 – Human Sexuality Workshops, U-M Medical Center, Ann Arbor.*

April 29-30 – Annual Meeting, Michigan Chapter, American College of Surgeons, Towsley Center, Ann Arbor, contact: Joseph P. Elliott, MD, secretary, Michigan Chapter, ACS, 2799 W. Grand Blvd., Detroit 48202.

May 1-2 – Ophthalmology Conference, U-M Medical Center, Ann Arbor.*

May 4 – The Council, Michigan Inn, Southfield, contact: Warren F. Tryloff, director.

May 4-6 – MSMS House of Delegates, Michigan Inn, Southfield, contact: Richard Campau, MSMS headquarters.

May 5-7 – Annual Meeting, MSMS Auxiliary, Troy Hilton, contact: Phyllis Jones, president, 15839 Crescent Drive, Allen Park 48101.

May 6-10 – Tutorial session, clinical cardiology, Henry Ford Hospital, limited enrollment, contact: Sidney Goldstein, MD, Head, Division of Cardiovascular Disease, Henry Ford Hospital, Detroit 48202.

May 7 – Seminar on Medicine and Law (Malpractice), Institute for Continuing Legal Education, U-M Medical Center, Ann Arbor.*

May 10 – Seminar, "Patterns in Viral Hepatitis," Michigan Society of Pathologists, St. Mary Hospital, Grand Rapids, contact: Robert Hendrix, MD, Department of Pathology, U-M, Ann Arbor 48104.

May 13-14 – Postgraduate course in treatment and drug therapy, U-M Medical Center, Ann Arbor.*

May 21-23 – Michigan Public Health Association annual meeting, Pantlind Hotel, Grand Rapids, contact: Barbara Clark, program chairman, 1800 Kales Bldg., 76 W. Adams, Detroit 48214.

June 3-5 – Annual meeting, Michigan chapter, American Academy of Pediatrics, Bay Valley Inn, contact: Charles M. Coffman, executive secretary, 4791 Haddington Drive, Bloomfield Hills 48013.

June 3-6 – Postgraduate course in advances in internal medicine, U-M Medical Center, Ann Arbor.*

June 3-7 – One-week tutorial session in clinical cardiology, Henry Ford Hospital, limited enrollment, contact: Sidney Goldstein, MD, Head, Division of Cardiovascular Disease, Henry Ford Hospital, Detroit 48202.

(Continued page 176)

Has it D.A.W.ned on you that there's a new generic drug law in Michigan?

It takes effect in April, 1975

The new law passed by the Michigan legislature will have a serious impact on you as medical practitioner.

This law allows the pharmacist to substitute *without your knowledge* or *consent* a so-called "generic equivalent" drug product in place of the brand you prescribed, if the purchaser so requests. This law does not say what a "generic equivalent" is.

It will create problems for you

The law is founded on the mistaken assumption that most or all drug products having the same active ingredients will perform substantially in the manner intended or expected by the physician.

Recently, a comprehensive investigation by a congressional agency — the Office of Technology Assessment — reported that drug product inequivalency is an important health care problem yet to be resolved. Their report stated that "CURRENT STANDARDS AND REGULATORY PRACTICES DO NOT ASSURE BIOEQUIVALENCE FOR DRUG PRODUCTS."

It is important that you remember "D.A.W."

If you wish your brand prescriptions to be dispensed exactly as written; that is, if you wish your patient to receive the product of a particular manufacturer, the law requires you to write out the phrase "dispense as written" or the initials "D.A.W." on each prescription.

If you omit the phrase or "D.A.W." and if the purchaser, who may not be the same person as the patient, requests a substitute drug product from the pharmacist, *the pharmacist will be allowed to substitute without consulting or even notifying you*. Furthermore, if the prescription is refillable, the patient could receive a different product *each time the prescription is refilled*.

You may be legally liable unless you write "D.A.W."

This new law created important liability questions that did not exist before its enactment. If the practitioner writes a brand name prescription and *does not* insert the phrase "dispense as written" or the initials "D.A.W.," he may be exposed to malpractice liability for any adverse consequences arising from substitution.

Remember, write "D.A.W." and keep the choice where it belongs — in your hands

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107th Medical Alumni Reunion
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June 11 – Council, MSMS headquarters, contact: Warren F. Tryloff, director.

June 15-19 – AMA Annual Convention, Atlantic City.

June 20-21 – Annual Keyport Trauma Symposium, sponsored by Michigan Committee on Trauma, ACS, at Otsego Ski Club, Gaylord, contact: B. E. Henig, MD, 308 Michigan Ave., Grayling 49738.

June 20-21 – Upper Peninsula Medical Society, Holiday Inn, Marionette, Wis., contact: Harold P. Brukardt, MD, chairman, 534 First St., Menominee 49858.

June 23-27 – Northern Michigan summer postgraduate education course for physicians, sponsored by U-M Medical Center, at Shanty Creek Lodge, Bellaire.*

July 26-27 – AMA Regional Continuing Medical Education Courses, Minneapolis, contact: CME Circulation and Records Dept., AMA, 535 N. Dearborn, Chicago, 60610

Aug. 2 – The Council, Bay Valley Inn, Bay City, contact: Warren F. Tryloff, director

Aug. 9-13 – Annual meeting and scientific assembly, Michigan Academy of Family Physicians, Park Place Motor Inn, Traverse City, contact: Rita Feldkamp, executive secretary, 933 Wing St., Plymouth, 48170

Sept. 13 – September Seminar, "Pathology of the Breast," Michigan Society of Pathologists, St. John Hospital, Detroit, contact: Robert Hendrix, MD, Department of Pathology, University of Michigan, Ann Arbor, 48105

---

*Contact Robert K. Richards, Towsley Center, University of Michigan, Ann Arbor 48104.

"First of all, relax."

Putting out the fires of arthritic pain

Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed: "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."*

If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.

Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.

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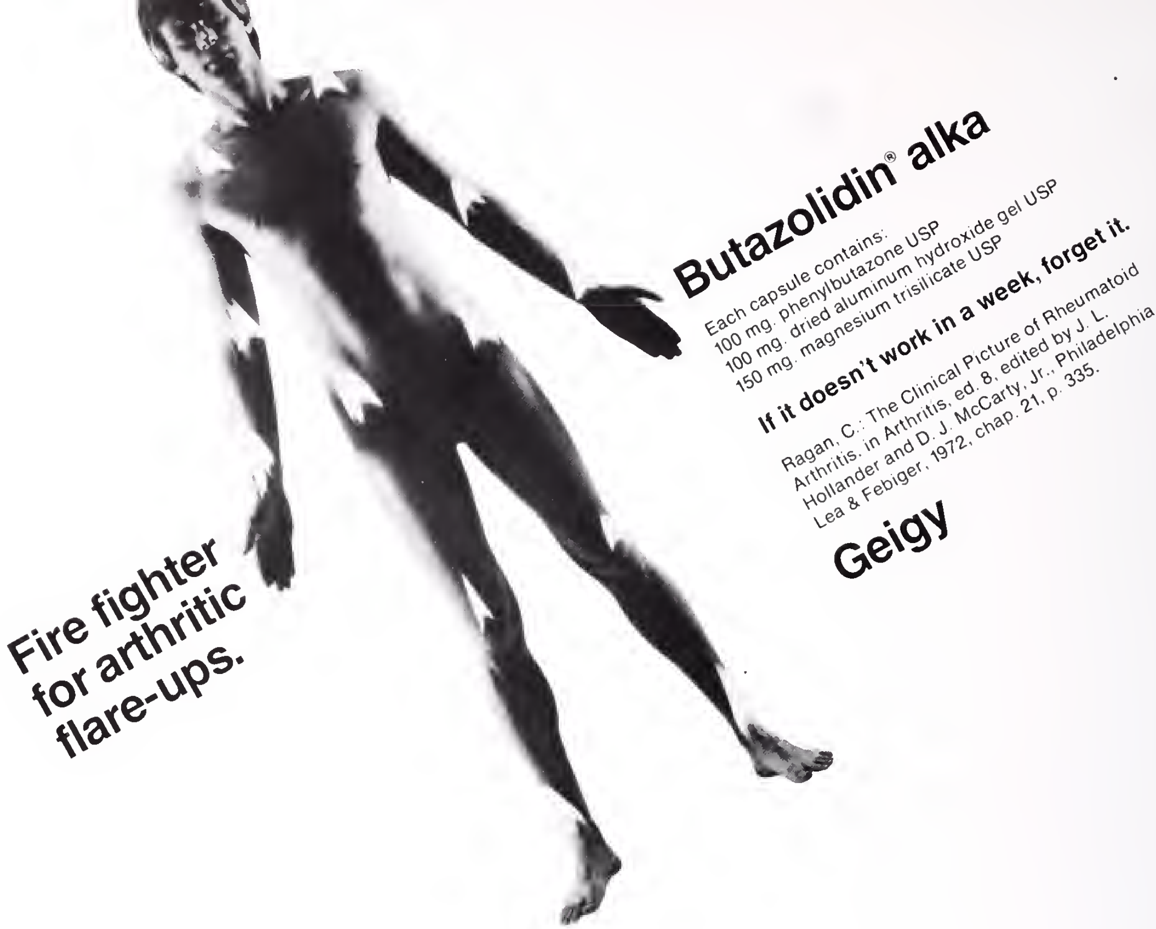
Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.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150 mg. magnesium trisilicate USP
If it doesn't work in a week, forget it.
Ragan, C.: The Clinical Picture of Rheumatoid Arthritis, in Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335.
Geigy

Important Note This drug is not a simple analgesic. Do not administer casually Carefully evaluate patients before starting treatment and keep them under close supervision Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc) before prescribing and at frequent intervals thereafter Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently Warn patients not to exceed recommended dosage Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy Dosage should be taken with meals or a full glass of milk Substitute alka capsules for tablets if dyspeptic symptoms occur Patients should discontinue the drug and report immediately any sign of fever, sore throat, oral lesions (symptoms of blood dyscrasia), dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema A one-week trial period is adequate Discontinue in the absence of a favorable response Restrict treatment periods to one week in patients over sixty

Indications Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis

Contraindications Children 14 years or less, senile patients, history or symptoms of G I inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias; renal, hepatic or cardiac dysfunction, hypertension, thyroid disease, systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy

Warnings Age weight, dosage, duration of therapy, existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug Use lowest effective dosage Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug Use with caution in first trimester of pregnancy and in nursing mothers Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation Unexplained bleeding involving CNS, adrenals, and G I tract has occurred The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid) Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination Swelling of ankles or face in patients under sixty may be prevented by reducing dosage If edema occurs in patients over sixty, discontinue drug

Precautions: The following should be accomplished at regular intervals Careful detailed history for disease being treated and detection of earliest signs of adverse reactions, complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy The majority of these patients were over forty Remember that arthritic-type pains can be the presenting symptom of leukemia

Adverse Reactions: This is a potent drug, its misuse can lead to serious results. Review detailed information before beginning therapy Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement

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For complete details, including dosage, please see full prescribing information.

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Welcome

Members of the Michigan State Medical Society join in welcoming the following new members into a progressive state medical organization. MSMS is dedicated to promoting the science and art of medicine, the protection of the public health, and the betterment of the medical profession. Each new member is encouraged to join with other MSMS members at both the local and state levels in achieving these goals.

E. Joseph Alberding, MD, 325 E. Centre St., Portage 49081
Joseph N. Badlissi, MD, 2864 Somerset #206, Troy 48084
Cecil G. Baker, MD, 91 Campbell, Newberry 49868
Roderick J. Baltzer, DQ, Comm. Mem. Hospital, S. Main, Cheboygan 49721
James R. Berg, MD, 1861 Bramble Drive, East Lansing 48823
James K. Billman, MD, P.O. Box 2086, Ann Arbor 48106
Jeffrey F. Block, MD, 1521 Gull Rd., Kalamazoo 49001
Lawrence F. Buxton, MD, 108 Worden Ave., Ann Arbor 48103
Herbert L. Camp, MD, 16 Snowfield Ct., Midland 48640
Eung Ryong Choi, MD, 3300 E. Deerfield Rd., Mt. Pleasant 48858
John W. Copenhaver, MD, 458 W. South St., Kalamazoo 49006
Gary F. Dardas, MD, 101 John St., Bay City 48706
Terry J. Dardas, MD, 101 John St., Bay City 48706
Paul G. Donohue, MD, 14930 Faust, Detroit 48823
Jayne W. Dye, MD, 216 N. State, Oscoda 48750
Alena Fabian, MD, 1322 E. Michigan, Lansing 48912
Jerald T. Finnegan, MD, 1521 Gull Rd., Kalamazoo 49001
John C. Flom, MD, 1009 E. Stadium Blvd., Ann Arbor 48104
John E. Francis, Jr., MD, 1634 Gull Rd., Kalamazoo 49001
Marvin L. Hage, MD, 2310 E. Stadium Blvd., Ann Arbor 48104
Chiau-Seng Hwang, MD, 500 Galloway Dr., Manchester 48158
Sigurd Janners, MD, 1301 College Ave., Houghton 49931
Eronico Javellana, MD, 502 W. Harris St., Newberry 48968
Donald F. Johnson, MD, 1521 Gull Rd., Kalamazoo 49001
David A. Junge, MD, 222 N. Saginaw Rd., Midland 48640
Jin Hee Kang, MD, 71-B Suzanne Dr., Lapeer 48446
Zachary Kanjuparamban, MD, 1320 E. Lincoln St., Mt. Pleasant 48858
Chang Choo Kim, MD, Alpine Center, Gaylord 49735
Joseph T. Latack, MD, Dept. of Radiology, Sparrow Hospital, Lansing 48902
Joseph S. Latoff, MD, 1210 S. US 27, St. Johns 48879
Eui-Dong Lee, MD, 215 N. Kalamazoo St., Paw Paw 49079
K. C. Lee, MD, 1322 E. Michigan, Lansing 48912
Wha Young Lee, MD, 1322 E. Michigan, Lansing 48912
M. J. Lexmond, MD, 524 Mather Ave., Ishpeming 49849
Curtis A. Liechty, MD, 1322 E. Michigan, Lansing 48912
Luis C. Maas, MD, 23077 Greenfield Rd., #250, Southfield 48075
Edgar P. Mannix, Jr., MD, 191 North Ave., Mt. Clemens 48043
Shantha Mariyappa, MD, 858 Pipestone Rd., Benton Harbor 49022
L. Robert McElmurry, Jr., MD, 209½ S. Walnut, Lansing 48933
N. M. McFadyen, MD, VA Hospital, Battle Creek 49016
Charles H. McManus, MD, 921 Webster, Traverse City 49684
Vicente M. Medalle, Jr., MD, 302 Kensington Ave., Flint 48503
Wm. J. Meinert, MD, 555 Linn St., Allegan 49010
Hector R. Mena, MD, 6337 Applewood St., Kalamazoo 49002
Clarence B. Nyce, MD, 6565 W. Main St., Kalamazoo 49009
Andis E. Ozolins, MD, 22255 Greenfield Rd., #231, Southfield 48075
Daniel V. Prendeville, MD, 224 Davidson Bldg., Bay City 48706
Laura B. Prescott, MD, Tolfree Medical Center, West Branch 48661
Ju Churl Rhee, MD, 602 E. Pottawatamie St., Tecumseh 49286
Tomlin C. Rosi, MD, Keyport Clinic, Grayling 49738
Rakesh N. Saxena, MD, 311 Warwick Dr., Alma 48801
M. David Sutton, MD, 4228 Beach St., Sanford 48657
John M. Talbot, MD, 3702 Applewood, Midland 48640
John W. Timmons, MD, 3901 Beaubien, Detroit 48201
John R. Trittschuh, MD, 255 Bronson Medical Ctr., Kalamazoo 49006
Samson Velena, MD, 111 S. Chestnut, Reed City 49677
Geoffrey A. Wardwell, MD, 458 W. South St., Kalamazoo 49006

Letters

Women Physicians

To the editor,

Would you kindly send me several extra copies of the January issue of *Michigan Medicine?* I shall be happy to reimburse you if there is a charge. Congratulations on this fine issue highlighting women physicians!

Sincerely,
Clara Raven, MD
Detroit

To the editor,

I really enjoyed your issue on women physicians. I was especially impressed by the way you handled the article in which I was cited. I would like some extra copies or tear sheets of pages 15 through 18, if you can supply them.

Sincerely,
Marilyn Heins, MD
Associate Dean for Student Affairs
WSU School of Medicine

To the editor,

I found your January issue featuring women physicians very interesting and I enjoyed it very much. However, I can't help but wonder about your sincerity when in this same issue (p. 3) Brooker L. Masters states, "I would wish for each doctor of MSMS enhancement of that all-important rapport with *his* patients." What about *her* patients?

Sincerely,
Maryann Sharma, RN
Wyoming

To the editor,

I am writing to express my utter disbelief over your paragraph on the cover of the January issue of *Michigan Medicine.*

It would seem to me that while many women physicians are indeed mothers and wives, that an equal number of male physicians could be considered husbands and fathers. I point this out not as a male chauvinist, but because it is this very thinking which has held back the women's movement for so long. I will be most surprised if one of the very women mentioned in this month's Journal doesn't write expressing a similar viewpoint.

The competence of a physician, parent or spouse has nothing to do with a person's sex.

Thank you. Best regards.

William B. Cheeseman, President
Stratton, Cheeseman and Associates, Inc.

To the editor,

I was appalled to see that Muriel Meyers of the Simpson Memorial Institute, the University Hospitals, Ann Arbor, was not included in the women represented in the newspaper article (sic) ("Distinguished Representatives of Michigan's Women MDs"). I believe that Doctor Meyers represents the elite of medicine, both at the university and at the state level. She is well known not only for her knowledge and applications, but also for her humanity in caring for seriously ill patients and for their families. Your deletion is regrettable.

Very truly yours,
Earl S. Rhind, MD
Orthopaedic Associates of Holland, PC

(Editor's Note: Doctor Meyers was invited, at the suggestion of the U-M Medical School, to send photo and biographical information to MSMS in October, in order that she might be included in the issue. As she did not reply, and the editors did not personally know her to pursue the matter further, she was omitted from the issue. We are happy that Doctor Rhind's letter gives her some of the recognition she so obviously deserves.)

American Physicians Art Association

To the editor,

We would like to invite our medical colleagues to become members of our national non-profit organization which is dedicated to furthering art interests of the medical profession; to broadening the physician's knowledge and appreciation of the past and present; to stimulating physician artists to produce works of art in the fields of painting, sculpture, photography, graphic arts, design and creative crafts; to holding a national annual exhibition of physicians' art works; and to stimulating regional art exhibitions of physicians' works at local, state and specialty meetings.

Our art exhibit is held annually in conjunction with the annual meeting of the American Medical Assocation. The APAA has a membership which extends across the entire United States, Canada

(Continued page 182)

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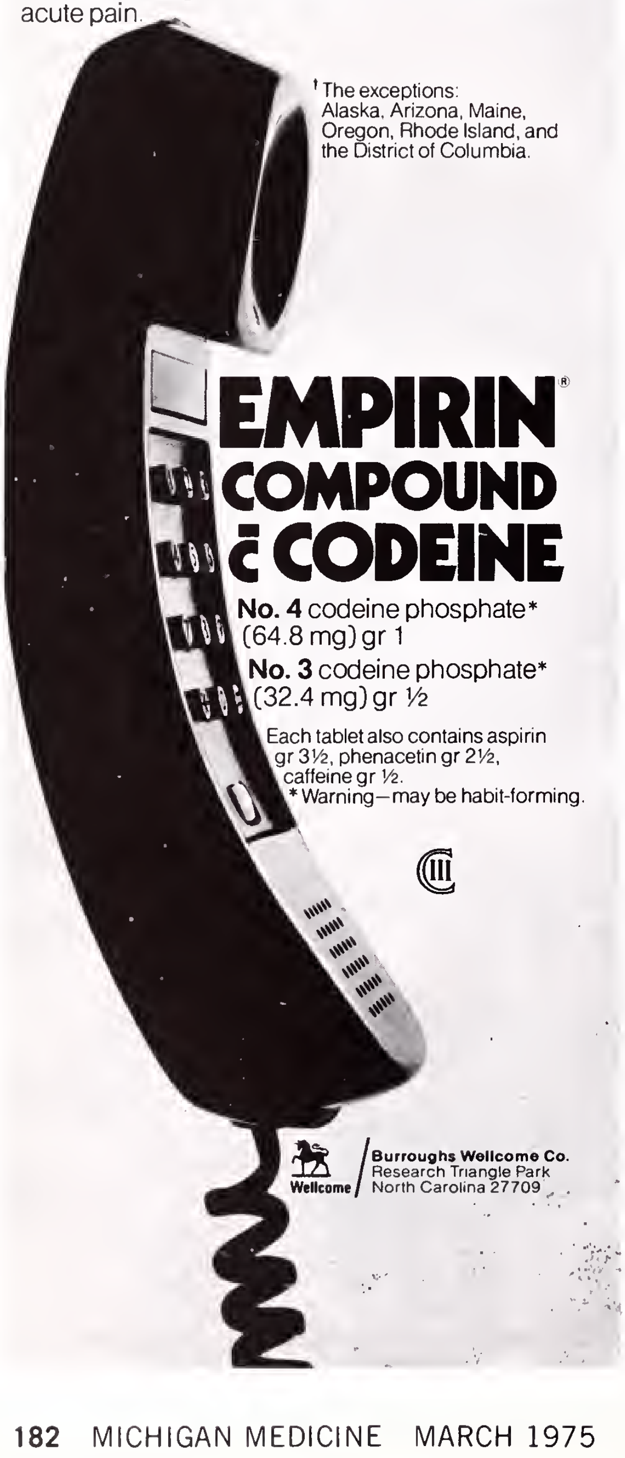

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and Latin America. Every state in the Union is represented through a regional director. It is the hope of the APAA to establish a central photographic archive of its members' art works, to be used for year round press and magazine publicity in the physicians' home towns as well as nationally.

You do not necessarily have to be currently engaged in any art activity to become a member. We also welcome the support of anyone interested in furthering physicians' art in America, as our organization is totally supported by the members and friends of the APAA. The types of membership are:

Life Sponsor Membership	$200
Sponsor Membership	30
Regular Membership	15
*Associate Membership	5

(*Associate Membership is for Medical students, interns and residents.)

If you are interested in becoming a member, or if you wish further information, please contact the President of APAA, Victor C. Laughlin, M.D., 3270 Green Road, Cleveland, Ohio 44122.

Thank you.
Victor C. Laughlin, MD, F.A.C.S.
President

Thanks for Info On Chiropractic

To the editor,

The information that MSMS sent to me on chiropractic was outstanding! It was a wonderful asset in helping me to reach the students and warn them of the dangers of the practice. I felt a handwritten note was in order to let you know how grateful I am for your aid.

Sincerely,

Harriette Asentaski
Ubly Community High School

Thanks from SAMA

To the editor:

On behalf of the Student American Medical Association we wish to thank you for continuation of your sustaining membership for the year 1975. We sincerely appreciate your contribution of $100, and are grateful for your support towards our efforts to help medical students become actively involved in the issues facing the new physician.

Sincerely,

Louis R. Giancola
SAMA Executive Director

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POSITION WANTED: Male MSU Medical Student desires work as physicians assistant Okemos - East Lansing, Tri County area. Experienced in office procedures, SAMA-MECO, MSU Preceptorship program. Contact (517) 349-4030. Jerry Jackson, 1647-l Spartan Village, East Lansing, Michigan 48823

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PHYSICIAN'S ASSISTANT seeking employment in lower Michigan area. 3 years experience as Pediatric assistant for 3 pediatricians. 4 years Medical corpsman with the USAF. Rated member of AAPA. Resume and references available on request. Gordon L. Shull, 504 Cedar Hill Lane, Raleigh, N.C. 27609.

FAMILY PRACTITIONERS — Henry Ford Hospital, a 1,100 bed teaching hospital, is scheduled to complete new satellite multispecialty clinics in suburban Dearborn and West Bloomfield, Michigan, in the fall of 1975. Twenty-four hour ambulatory, non-appointment medical services will be offered. We are seeking physicians interested in staffing these non-appointment clinics on a full-time basis. Trained E.R. physicians may rotate with the staff of the Henry Ford Hospital E.R. in Detroit if desired. Among the many attractive features offered are an excellent salary and benefit program including malpractice insurance, a lease car plan, and association with Henry Ford Hospital's staff of 235 specialists. Interested physicians should correspond with Dr. Charles Wolf or Dr. Bruce Steinhauer, Satellite Clinic Medical Directors, Henry Ford Hospital, Detroit, Michigan 48202.

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Psychiatrist-Director

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In Memoriam

Peter P. Brue, MD
Kalamazoo

Peter Paul Brue, MD, Kalamazoo internist and cardiologist, died Jan. 23 at the age of 67. Doctor Brue was a graduate of Georgetown University Medical School and had practiced 18 years in Washington, D.C. when he also belonged to the DC Medical Society. Since then he had been affiliated with Bronson Methodist and Brogess hospitals in Kalamazoo. He was a diplomate of the National Board of Medical Examiners.

Raymond S. Goux, MD
Detroit

Detroit otolaryngologist for more than 50 years, Raymond S. Goux, MD, died Jan. 24 at the age of 87. Doctor Goux was a lifelong Detroiter and a graduate of the Detroit College of Medicine and Surgery. He was on the staff of the Grace Hospital for more than 50 years and had been head of the department of ophthalmology and otolaryngology there. He was a past president of the Detroit ophthalmological and otolaryngological societies and a member of the American Academy of ophthalmology and otolaryngology.

Joseph M. Grace, MD
Birmingham

The former head of radiology at Mt. Carmel Mercy Hospital, Detroit, Joseph Markey Grace, MD, died Jan. 10 at the age of 75. Doctor Grace had been head radiologist for Michigan Bell Telephone Co. since retiring in 1965. He was a recent president of the Michigan Radiology Society and a fellow of the American College of Radiology. He was a graduate of Creighton University.

L. C. Ludlum, MD
Lansing

Lansing generalist Lewis C. Ludlum, MD, died Jan. 15 at the age of 89. Doctor Ludlum was a graduate of the University of Michigan Medical School and was affiliated with St. Lawrence and Sparrow hospitals in Lansing.

Osmo I. Niemi, MD
Gwinn

Retired U.S. Air Force Colonel and flight surgeon, Osmo I. Niemi, MD, Gwinn, died Jan. 14. Doctor Niemi was a graduate of Northwestern University Medical School and practiced in Marquette until 1942. He then served at Wurtsmith AFB until 1963 and following that assisted at Northern Michigan University Health Center. He was a fellow of the American College of Preventive Medicine. He was 68.

Dennis V. Smith, MD
Ann Arbor

Dennis Vincent Smith, MD, Ann Arbor, died Jan. 15 at the age of 87. Doctor Smith, an ophthalmologist, was a graduate of the U-M Medical School and spent 14 years under the Methodist Board of Foreign Missions in Peking. He once treated the Pan Shan Lama, religious leader of Tibet. He also practiced 29 years in Long Beach, Calif., and served as an ophthalmologist from 1961 to 1971 at the U-M Health Service. He was a member of the American Academy of Ophthalmology and Otolaryngology.

Arthur L. Stanley, MD
Lansing

A recipient of the MSMS Certificate of Commendation in 1972, Arthur L. Stanley, MD, Lansing, died Jan 21 at the age of 67. Doctor Stanley was former director of the Ingham Medical Center for 13 years and had been affiliated with the hospital since 1944. A thoracic surgeon, he was known for his pioneering open-heart surgery in the Lansing area. Doctor Stanley was a graduate of the University of Michigan Medical School. He also had been active in Cuban relief and community mental health.

Tetsuo Sugiyama, MD
Grand Rapids

Kent County urologist Tetsuo Sugiyama, MD, died Jan. 19 at the age of 59. He was a graduate of the University of California Medical School and had been in private practice in Grand Rapids since 1946. He was affiliated with Butterworth, Blodgett Memorial and Ferguson-Droste-Ferguson hospitals.

Abraham Tauber, MD
Pontiac

Abraham Tauber, MD, Pontiac psychiatrist, died Nov. 25 at the age of 62. Doctor Tauber was a graduate of Wayne State University School of Medicine and was affiliated with Pontiac General, St. Joseph Mercy and Glen Eden hospitals. He was a member of the American Psychiatric Association and the Michigan Society of Neurology and Psychiatry.

respond to one

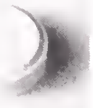
According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.



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anxiety states
with associated
depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Neither the editors nor the state medical society will accept responsibility for statements made or opinions expressed by any contributor in any article or feature published in the pages of the journal. In editorials, the views expressed are those of the writer and not necessarily official positions of the society.

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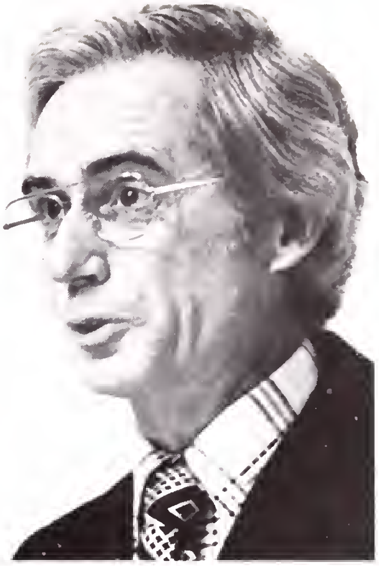
President's Page

MSMS Action Bringing Malpractice Solution Closer



Brooker L. Masters, MD

I am indeed proud of our Michigan State Medical Society.

Without question, the "malpractice mess" has posed the greatest threat to the delivery of adequate and quality medical care that we in Michigan ever have faced.

Your organization has approached the issues of availability and cost of professional liability insurance from a broad and comprehensive base. First, MSMS analyzed the complexities of the problem and then marshalled all the forces available — our component societies, the press, Governor Milliken, the legislature, the hospitals, and now, all the people — into a consensus.

At the present, the following actions are being vigorously pursued by MSMS:

1. An intense information campaign is aimed at doctors, other providers, the legislature and the public.

2. Our legislative package has been introduced into the legislature with bipartisan support. Much action is expected during this April-May period on MSMS-supported bills.

3. MSMS is working to provide the Medical Practice Board with adequate funds to permit it to regulate physicians properly.

4. MSMS has urged the State Supreme Court to regulate attorneys' contingency fees.

5. Our own insurance company is a real possibility. Granted that doctors don't want to be in the insurance business, this can be a positive step to re-establish sanity into professional liability coverage, and it can be a self limiting mechanism once the commercial carriers can be shown how to write a sensible plan of coverage. A complete proposal for an MSMS mutual insurance company will be reviewed by the MSMS House of Delegates May 4-6.

Combining our own company with a medical protective association to defend all doctors and truly monitor peer review on behalf of our patients could prove the most positive achievement for our profession to come out of this long struggle.

* * *

These actions and many other day-to-day efforts will accomplish the two necessary goals: (1) to make insurance available to all doctors at reasonable cost, and (2) to change the climate for the future protection of both the profession and the public.

Changing the climate is the only long-term answer to the professional liability problem. But it will require the support of Michigan physicians for a total program over the long haul at considerable personal and monetary sacrifice.

Today's medical practice is too good and too necessary to the public to be allowed to go down the drain. Your organization, the Michigan State Medical Society, is meeting this challenge. I ask for your input, evaluation and support!

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"Probably" effective: For estrogen deficiency-induced osteoporosis, and only when used in conjunction with other important therapeutic measures such as diet, calcium, physiotherapy, and good general health-promoting measures. Final classification of this indication requires further investigation.

Contraindications: Short acting estrogens are contraindicated in patients with (1) markedly impaired liver function; (2) known or suspected carcinoma of the breast, except those cases of progressing disease not amenable to surgery or irradiation occurring in women who are at least 5 years postmenopausal; (3) known or suspected estrogen-dependent neoplasia, such as carcinoma of the endometrium; (4) thromboembolic disorders, thrombophlebitis, cerebral embolism, or in patients with a past history of these conditions; (5) undiagnosed abnormal genital bleeding.
Warnings: Estrogen therapy should not be given to women with recurrent chronic mastitis or abnormal mammograms except, if in the opinion of the physician, it is warranted despite the possibility of aggravation of the mastitis or stimulation of undiagnosed estrogen-dependent neoplasia.

The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, retinal thrombosis, cerebral embolism and pulmonary embolism). If these occur or are suspected, estrogen therapy should be discontinued immediately.

Estrogens may be excreted in the mother's milk and an estrogenic effect upon the infant has been described. The long range effect on the nursing infant cannot be determined at this time.

Hypercalcemia may occur in as many as 15 percent of breast cancer patients with metastases, and this usually indicates progression of bone metastases. This occurrence depends neither on dose nor on immobilization. In the presence of progression of the cancer or hypercalcemia, estrogen administration should be stopped.

A statistically significant association has been reported between maternal ingestion of diethylstilbestrol during pregnancy and the occurrence of vaginal carcinoma in the offspring. This occurred with the use of diethylstilbestrol for the treatment of threatened abortion or high risk pregnancies. Whether or not such an association is applicable to all estrogens is not known at this time. In view of this finding, however, the use of any estrogen in pregnancy is not recommended.

Failure to control abnormal uterine bleeding or unexpected recurrence is an indication for curettage.
Precautions: As with all short acting estrogens, the following precautions should be observed:

A complete pretreatment physical examination should be performed with special reference to pelvic and breast examinations.

To avoid prolonged stimulation of the endometrium and breasts in climacteric or hypogonadal women, estrogens should be administered cyclically (3 week regimen with 1 week rest period—withdrawal bleeding may occur during rest period).

Because of individual variation in endogenous estrogen production, relative overdosage may occur which could cause undesirable effects such as abnormal or excessive uterine bleeding, mastodynia and edema.

Because of salt and water retention associated with estrogenic anabolic activity, estrogens should be used with caution in patients with epilepsy, migraine, asthma, cardiac, or renal disease.

If unexplained or excessive vaginal bleeding should occur, reexamination should be made for organic pathology.

Pre-existing uterine fibromyomata may increase in size while using estrogens; therefore, patients should be examined at regular intervals while receiving estrogenic therapy.

The pathologist should be advised of estrogen therapy when relevant specimens are submitted.

Because of their effects on epiphyseal closure, estrogens should be used judiciously in young patients in whom bone growth is incomplete.

Prolonged high dosages of estrogens will inhibit anterior pituitary functions. This should be borne in mind when treating patients in whom fertility is desired.

The age of the patient constitutes no absolute limiting factor, although treatment with estrogens may mask the onset of the climacteric.

Certain liver and endocrine function tests may be affected by exogenous estrogen administration. If test results are abnormal in a patient taking estrogen, they should be repeated after estrogen has been withdrawn for one cycle.
Adverse Reactions: The following adverse reactions have been reported associated with short acting estrogen administration:
nausea, vomiting, anorexia
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possible diminution of lactation when given immediately postpartum
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headache
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If the patient has not menstruated within the last two months or more, cyclic administration is started arbitrarily. If the patient is menstruating, cyclic administration is started on day 5 of bleeding. If breakthrough bleeding (bleeding or spotting during estrogen therapy) occurs, increase estrogen dosage as needed to stop bleeding. In the following cycle, employ the dosage level used to stop breakthrough bleeding in the previous cycle. In subsequent cycles, the estrogen dosage is gradually reduced to the lowest level which will maintain the patient symptom-free.

Postmenopause—as a protective measure against estrogen deficiency-induced degenerative changes (*e.g.* osteoporosis, atrophic vaginitis, kraurosis vulvae)—0.3 mg. to 1.25 mg. daily and cyclically. Adjust dosage to lowest effective level.

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Here is Schedule For MSMS Annual Session May 4-6

The schedule is complete for the 1975 MSMS House of Delegates Annual Session May 4-6 at the Michigan Inn, Southfield. Attending the meeting will be MSMS delegates and alternates, councilors and officers, section and SAMA delegates, the immediate past president and medical school deans, county society secretaries and executive secretaries.

The Michigan Inn has reserved a block of rooms for housing accommodations, and room reservations were mailed early in March. The MSMS registration desk will be open at 10 a.m. Sunday, May 4 and will be located in the Great Lakes Foyer of the Inn.

Resolutions for consideration by the House were to be submitted by April 4, 30 days prior to the session.

Following is the Annual Session schedule:

Sunday, May 4

1:30 p.m. First Meeting, Michigan Room

Monday, May 5

8:30 a.m. Reference Committee hearings

Noon MDPAC Annual Luncheon — Superior Room

2:30 p.m. Second Meeting — Michigan Room

3:30 p.m. — Forum on National Health Planning — Michigan Room

6:30 p.m. — President's Reception — Great Lakes Foyer

7 p.m. — Installation Dinner — Superior Room

Tuesday, May 6

9 a.m. Third Meeting — Michigan Room (Reports of Reference Committees)

2 p.m. Fourth Meeting — Michigan Room (Elections)

The Michigan Inn, Southfield

MDPAC Luncheon May 5 to Present Congressmen

Two Michigan congressmen will speak at the annual luncheon Monday, May 5 of the Michigan Doctors Political Action Committee. They are Marvin Esch, R-Second District, and William Brodhead, D-17th District.

In addition, MDPAC will receive a 1974 membership prize from a representative of the American Medical Political Action Committee.

The Superior Room of the Michigan Inn, Southfield, where the 1975 Annual Session of the MSMS House of Delegates will be in progress, will be the scene of the noon luncheon. Tickets are available now and through registration for the Annual Session.

William Brodhead

Marvin Esch

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the compatible vasodilator... no treatment conflicts reported

The cerebral or peripheral vascular disease patient often has coexisting disease[1] which calls for another drug along with his vasodilator. It may be a hypoglycemic, miotic, antihypertensive, diuretic, anticoagulant, corticosteroid, or coronary vasodilator.

Vasodilan is not incompatible with any of these drugs—no treatment conflict has been reported. And, unlike other vasodilators, Vasodilan has not been reported to affect carbohydrate metabolism, liver function, or intraocular pressure—or to complicate treatment of diabetes, hypertension, peptic ulcer, glaucoma, or liver disease.

In fact, there are no known contraindications to the use of Vasodilan in recommended oral doses, other than that it should not be given in the presence of frank arterial bleeding or immediately postpartum.

Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows.

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Adverse Reactions: On rare occasions, oral administration of the drug has been associated in time with the occurrence of severe rash. When rash appears, the drug should be discontinued. Occasional overdosage effects such as transient palpitation or dizziness are usually controlled by reducing the dose.

Supplied: Tablets, 10 mg.—bottles of 100, 1000, 5000 and Unit Dose; 20 mg.—bottles of 100, 500 and Unit Dose.

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1. Gertler, M. M., et al.: Geriatrics *25*:134-148 (May) 1970.

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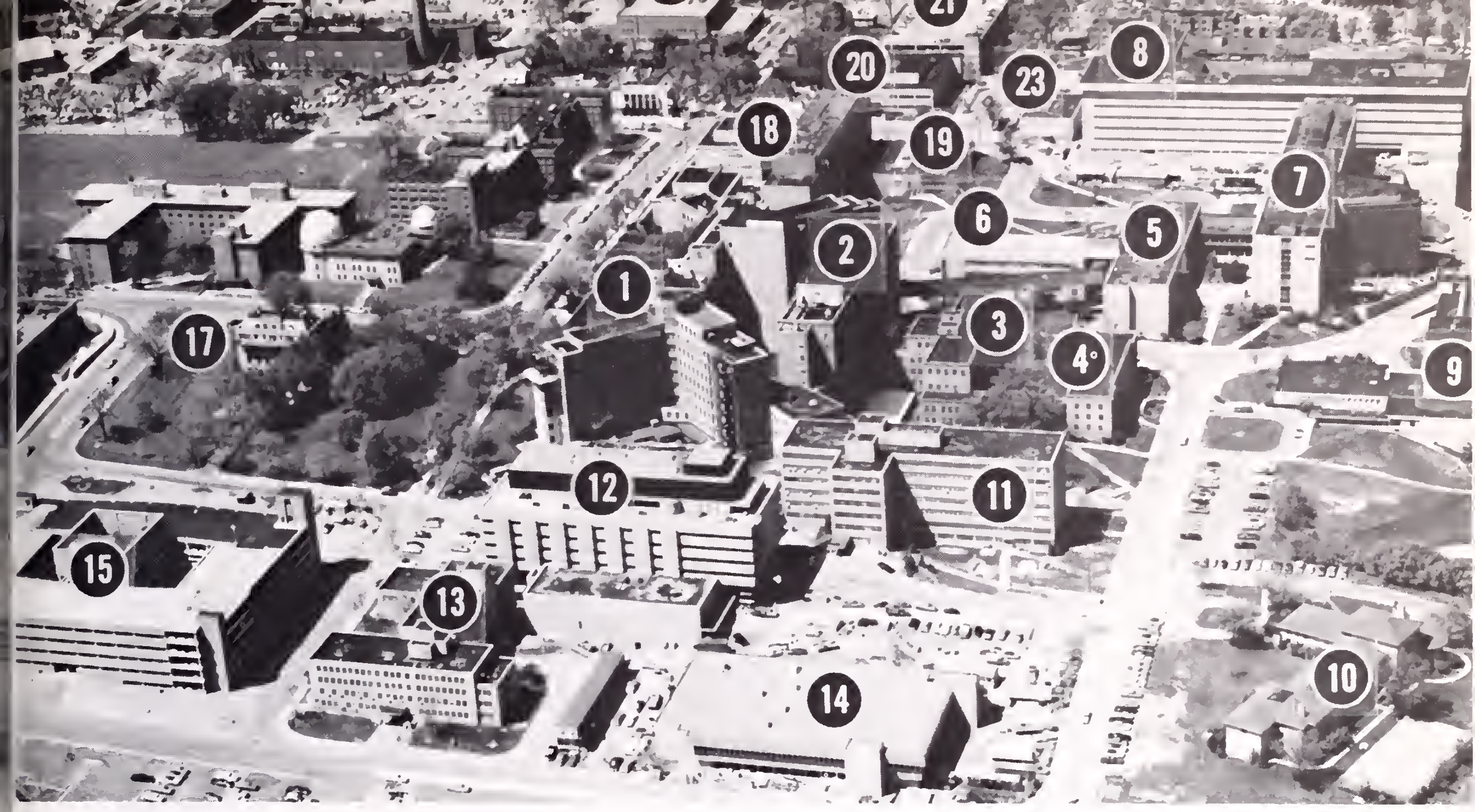

Legend:

1. *University Hospital*
2. *Surgical Wing*
3. *Neuropsychiatric Inst.*
4. *Interns' Quarters*
5. *Pathology*
6. *Nursing*
7. *Medical Science I*
8. *Medical Science II*
9. *Children's Psych. Hosp.*
10. *North Outpatient*
11. *Outpatient*
12. *Mott Children's Hosp.*
13. *Women's Hospital*
14. *Towsley Center*
15. *Parking Ramp*
16. *School of Pub. Hlth.*
17. *Simpson Mem. Inst.*
18. *Kresge Research Bldg.*
19. *Kresge Med. Library*
20. *Ment. Hlth. Res. Inst.*
21. *Parking Ramp*
22. *Neuroscience Building*
23. *Buhl Genetics*

Spotlight on the University of Michigan Medical Center, 1975

With 82 acres and 28 buildings devoted to medical, nursing and other health education, research and patient care, the University of Michigan Medical Center is the largest one-site concentration of such facilities in the world. It includes the nation's first university hospital, the largest baccalaureate school of nursing, and one of the country's major medical schools.

The average daily population of the Center is nearly 14,000 persons, with employees representing 33 per cent, students 29 per cent or nearly 4,000 persons, and visitors and patients the remaining 38 per cent, or 5,200 persons.

The University Hospital complex which itself is comprised of 14 buildings, is geographically part of the large collection of units called the Medical Center with some 15 miles of corridors running through and connecting the structures.

The considerable interaction between these units makes it difficult at times to distinguish patient care, research and teaching activities from each other. The Pathology Department, for example, conducts significant investigations into the disease processes, offers initial and advanced courses for medical students, medical technologists, and nursing students, and maintains diagnostic services for patients of University Hospital.

In general, educational facilities include the Medical School, located in a large complex along Catherine Street, and the 1,100-student Nursing School adjacent to the Pathology Building west of the Hospital. Currently, the medical school has 949 students enrolled in its traditional program and 137 in the Inteflex Program. Beyond these, over 700 students receive some of their academic course work in the medical school. In addition,

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Special sections will be devoted in future issues to medical education facilities at Wayne State University and Michigan State University.

training programs are conducted for a number of allied health professions, among them medical technology, and physical therapy. Students acquire clinical experience in the University Hospital itself, and its regional affiliates: Wayne County General Hospital, St. Joseph Mercy Hospital in Ann Arbor, the Ann Arbor Veteran's Administration Hospital, and Henry Ford Hospital in Detroit.

The University also boasts the largest dental school in the United States, a superb school of public health, and the nation's oldest college of pharmacy.

Research facilities are spread throughout the Medical Center, and cover a vast range of health concerns. Space is available on a grant basis in the Kresge Medical Research Complex. Hearing research has a permanent home in part of the Kresge complex. Across the street is the Mental Health Research Institute, in which, among other things, substantial research into the cause and treatment of clinical depression is conducted.

Within the Hospital itself, the new Upjohn Center for Clinical Pharmacology joins a number of hospital services in providing important contributions to clinical research efforts. The Clinical Research Unit itself, built with the assistance of the federal government several years ago, accepts grant proposals from U-M staff members to study the treatment of a variety of medical problems under intensively controlled conditions.

In the past three years, an effort has been made to create special facilities within which students, health care professionals, and officials could meet to share their research and general concerns.

The Towsley Center for Continuing Medical Education conducts year-round programs in postgraduate medical education, and sponsors colloquia on nearly a daily basis. The new Furstenberg Student Study Center, a futuristic, remarkably equipped facility in the basement of the Medical Science complex, offers supplementary audiovisual services, discussion rooms, lecture halls, and a large "social commons" for medical center community interaction.

The 600-bed Main Building is the locus of adult inpatient care programs, and most of the Hospital's administrative and support units. Constructed in 1924, the double-Y structure includes large wards (internal medicine, physical medicine and rehabilitation, and surgery), semiprivate and private rooms. In the past decade a significant portion of the inpatient care space has been remodeled for intensive care unit use. Presently, there are five such units operating in the Main Building: a burn treatment center which has served as a national model, coronary care, respiratory care, and medical intensive care units which form an ICU Suite on the building's tenth floor.

A new thoracic surgery comprehensive care unit has opened on the ninth floor offering special nursing and medical care for heart and lung surgery patients from admission to discharge. The same staff operates intensive, intermediate and rehabilitative care areas in one wing, delivering pre- and post-surgical care with a special emphasis on patient education. Another special unit for neurosurgery and neurology patients also is under construction on the ninth level.

Other inpatient services included in the Main Building are dermatology, gynecology, neurology, orthopedics, pulmonary care and a clinical research unit.

The building's lower floors house a wide range of clinical and administrative units. The pathology and radiology departments maintain substantial facilities there for diagnostic procedures. An impressive physical medicine and rehabilitation suite — including physical and occupational therapy divisions, and an orthotics/prosthetics laboratory — is located on the third level, as is the cardiology division's heart station (EKG Lab) and a large, comprehensive inpatient pharmacy. Under the auspices of the anesthesiology department, a respiratory therapy division operates out of second level quarters. Mail and supply services, plant engineering, and duplicating facilities are to be found on the lower two floors.

Although a building condition study funded by the state legislature has indicated that the Main Building is not suitable for long-term use for acute patient care, the on-going renovation program will maintain the quality of patient care areas until a new building can be funded and built. At that time the main structure, built in 1924, will be converted to less demanding use.

Other major facilities of the Medical Center include the *C. S. MOTT CHILDREN'S HOSPITAL;* built in 1969, an eight floor pediatric facility among the finest in the nation. Mott Hospital is a self-sufficient, 212-bed sub-unit of the Hospital complex, outfitted with its own diagnostic labs, operating suite, intensive care unit, satellite pharmacy, radiology, cardiac study, physical medicine and respiratory therapy unit.

The sub-19 year old clientele is assigned to floors according to age group, wears street clothing, selects food from a special menu (it includes hamburgers, milkshakes, hot dogs and french fries), and is confined to rooms only when medical reasons so dictate.

OUTPATIENT BUILDING, a seven story facility including some 33 clinical units. The fourth level and Medical Walk-In Suite is the busiest single unit in the complex. Clinical facilities in gener-

Robert C. Borer, MD, right center, a neo-natologist in the University of Michigan's Holden Perinatal Unit, watches as one of the unit nurses completes a treatment procedure. Parents of the infant patient also observe.

al serve approximately 1,000 patients each day on an ambulatory basis.

WOMEN'S HOSPITAL

To the southwest of Mott Hospital is a 60-bed maternity facility constructed in 1950. Nurseries, delivery and labor rooms, and patient rooms are located on the upper floors, counseling and pregnancy care services on the first. Facilities are available to husbands for overnight stays.

HOLDEN PERINATAL FACILITY

The two-year old Holden Perinatal Research Laboratories include a high-risk delivery room with access routes directly into the maternity facility, the pediatric surgery area, and intensive care nurseries for newborn infants with exceptional medical problems. Holden patients include infants from other institutions brought to the facility by specially trained teams of U-M staffers to receive neo-natal intensive care unavailable elsewhere.

NEUROPSYCHIATRIC INSTITUTE AND CHILDREN'S PSYCHIATRIC HOSPITAL

The Neuropsychiatric Institute is an 81-bed facility which includes psychological services, occu-

(Continued on page 208)

Clinical pharmacist Bruce Carlson extracts radio-pharmaceuticals from lead containers in the specially-constructed medication area of the Nuclear Medicine Unit.

Medical Students study full-color slides of blood cells while listening to a taped narrative in one of 37 multi-media carrels in the new Furstenberg Student Study Center at the U-M Medical School.

U-M Med School Curriculum Comprised of Six- and Eight-Year Programs

By Jean Pearson
Special to Michigan Medicine

From high school student to MD degree in six years might seem like a fast track. But at the University of Michigan Medical School 141 students ranging in age from 17 to 21 are on that track, sprinting well. Each year, 50 more exceptionally talented students fire away from the starting blocks. In 1978, when the first class graduates, five of the new MD's will be only 23 years old.

All of these young future physicians are in a combined, accelerated program of the University of Michigan College of Literature, Science and the Arts (LS & A) and the Medical School.

The program, which admitted its first class in 1972, is called "Inteflex" for Integrated, Flexible Pre-Medical/Medical School Curriculum. It is also referred to by its initial code of "IPMP."

The goal of Inteflex is to produce well-rounded, highly trained physicians in less than the traditional eight years of college education.

George R. DeMuth, MD, Associate Dean of the Medical School and Director of Inteflex, says a major benefit of the program will be having doctors enter practice earlier, before they are 30. Most of the Inteflex students will be 24 years old when they receive their MD Degree. At present, new physicians take an additional three to six years of post-graduate training before starting practice.

When the program was announced, John A. Gronvall, MD, Dean of the Medical School, said, "Under Inteflex, the LS & A and Medical School curriculums will be consolidated and coordinated, offering a smooth transition from basic to clinical sciences while maintaining a strong flavor of humanities and social science courses." Even in their final year of medical school, Inteflex students will be taking such liberal arts courses as philosophy and sociology.

A few other universities have started six year accelerated MD programs. Their approach, however, is often different from Michigan's.

U of M, Doctor DeMuth explains, puts an emphasis on the humanities and social sciences for student doctors in its condensed programs whereas other universities often compress and compact the pre-medical portion of the education, usually at the expense of the humanities.

But society, Doctor DeMuth says, "needs physicians who are able to attack problems using the techniques of the humanities as well as those of the scientist."

Two Courses Followed by Medical Students

Two basic curricula lead to the MD degree at the University of Michigan. One is followed by Inteflex students; the other is standard. Within both there are opportunities for flexibility and variations, primarily in the later years.

Of the 1,085 students now enrolled in the MD programs, 944 are in the standard medical school curriculum of four years' duration. Each year 237 students are accepted into the standard curriculum from either their third or fourth year of undergraduate college.

Over 4,000 applications for the standard curriculum were received last year for the 237 first-year spots. Of those, 20 to 25 percent (982) were interviewed. About 2,300 of the applications came from out-of-state students. Since Michigan will take up to 20 percent of its medical students from out-state, that meant about 2,300 applicants were vying for only 40 spots.

Obviously, the competition is keen. And, as the number of qualified applicants has soared, so have the minimum criteria for admission. The mean grade point average for the Class of 1978 was 3.55 (out of a possible 4.0) and their average Medical College Admission Test (MCAT) score was 605.

Colin Campbell, MD, assistant dean for student affairs and director of admissions, says that a notable difference of the 1978 class was that many more of the applicants had a strong science background.

"This year's class," he reports, "averaged around 634 on that section (of the MCAT), placing them in the top 15th percentile nationally."

The regular four year medical school curriculum, the Medical School Bulletin states, consists of science courses basic to medicine and courses in applied clinical medicine.

In the first year, the student is introduced to the basic medical sciences. Biochemistry, physiology, gross and microscopic anatomy and embryology are specified courses. Throughout the entire year the basic structure of the nervous system and its function and an introduction to behavior are integrated in a course entitled "Neural and Behavioral Sciences." It is the first of a two-year sequence.

An introduction to the clinical sciences is presented in a course called "Clinical Medicine" which, like Neural and Behavioral Sciences, extends over two years. The main goals of the clinical medicine courses are to prepare students for the clinical clerkships of the junior year by introducing students to patients and patient problems, early in the curriculum and to assist them in recognizing the relevance of the basic science material which they are expected to master.

During the second year study of basic science continues through courses in microbiology, pharmacology and pathology. The Neural and Behavioral Sciences and Clinical Medicine courses continue throughout the year.

Emphasis in the second year is more related to disease. By the end of the year the student is prepared to assume his role (beginning in the third year) as a clinical clerk who learns to take the responsibility for patient care.

In accordance with a curriculum change in 1967, all the lectures are in the first two years and clerkships in the second two years.

Charles Votaw, MD, Assistant Dean for Curriculum, says the curriculum change in 1967 was based on the assumption that when one attends in the capacity of a ward clerk that he should devote 100 percent of his effort to that activity and that to leave that clinical activity to go to a whole class exercise dealing with a different topic would be "unnecessarily distracting, interfering."

The clinical phase (the last two years) consists of 22 four-week periods. Thirteen of these periods consist of required clerkships. The remaining nine are elective. Within these nine periods, one may be taken as a vacation.

Three continuous periods are devoted to general internal medicine. One period is spent on short rotations through the services of dermatology, neurology and physical medicine and rehabilitation.

Three continuous periods are devoted to surgery. Students spend two of these periods on general surgery wards. The remaining period is spent in an "elective" of four weeks' duration in the departments of anesthesiology or otorhinolaryngology or one of the surgical sections: neurosurgery; urology; orthopaedic, thoracic or plastic surgery. The student must take an additional period in surgery but it need not be contiguous with the above three periods.

Two periods are given to work in the department of pediatrics and two more in obstetrics and gynecology. One four week period is devoted to a psychiatry clerkship, which is a separate clerkship for the first time this year.

Curriculum Changes Continue

"Psychiatry has always been required as a clerkship experience," Dr. Votaw notes, "but it was a position of a 16-week curriculum which was devoted to pediatrics, OB/GYN and psychiatry.

"In our new curriculum, there are eight identifiable weeks in pediatrics, eight in OB/GYN and four identifiable weeks in psychiatry. That added four weeks to our required curriculum, which was 48 weeks previously and is now 52."

The total number of weeks of instruction in the last two years is now 88 — 52 required and 36 elective.

"Another change this year," Dr. Votaw reports, "is that the 36 weeks are divided into four-week blocks. Previously, they were five-week blocks. We changed it to four so we could have nine elective periods in those 36 weeks."

"The other good part of that change is that it placed our calendar on the same base as Wayne State University School of Medicine's so that about 60 percent of the time they directly overlap.

This is helpful because we have a cooperative agreement with the other medical schools (Wayne and Michigan State University). With a direct overlap, our students can take their electives and their students can take ours."

Electives are usually one or two periods in duration but may be longer if a special reason exists. Studies may be carried out at the University of Michigan Medical Center, St. Joseph Mercy Hospital (in Ann Arbor), Wayne County General Hospital, Veteran's Administration Hospital in Ann Arbor, Henry Ford Hospital or any other recognized institution.

"The ones that always fill up are the general electives," Dr. Votaw reports, "That is, general medicine, general family practice or the preceptor types."

"Surgery rotations, even general surgery, chronically do not fill. Some of the specialties in medicine are also popular, such as cardiology, pulmonary and infective diseases. These are the ones that tend to be chronically filled by our own students (who have first choice over students from Wayne or MSU for a specified period of enrollment time)."

"I believe the fourth-year students are looking for what they believe will be good basic information for whatever future work they plan to do. General medicine is a good base whether you want to have a family practice or some sophisticated sub-specialty in medicine or surgery."

"They also tend to take things they think are going to be extremely important to them and they might not have another opportunity to experience. Cardiology, I think, fits in whether you are a surgeon or a pediatrician, for example. Ear, nose and throat is another popular rotation. Radiology tends to be very popular."

The U of M Medical School, Wayne School of Medicine and Michigan State College of Human Medicine have a cooperative program under federal support, to develop a preceptorship program. It involves identifying physicians in the state who are willing to accept students and serve as preceptors for them for part or all of a year.

Michigan's responsibility is financial management of the program; Wayne's responsibility is to identify preceptors, and MSU's is to provide training for the preceptors (on what you can expect in a student, what they can ask of a student, how to evaluate a student and how to make the preceptorship a good educational experience). As of February (1975) there were 287 preceptors in the state.

"We have several programs which use preceptors and one of them is Inteflex," Dr. Votaw says. "At the end of their first year Inteflex students have a preceptorship. Our standard curriculum freshman can ask for a preceptorship during the summer period if he wants the experience. It's not a requirement though, not a part of the curriculum."

Inteflex Students Study Science and Humanities

Students in the Inteflex Program get an early start on observing patient care.

Though the first and second semesters of year one are primarily under-graduate introductory level courses, the spring half semester is given to a special course, "Introduction to Patient Care." The goal of this course is to allow students to observe first-hand the activities of a clinician in practice.

The second year of Inteflex is primarily devoted to a continuation of the humanity and science subjects in the under-graduate college plus specific medical courses of biological chemistry and microscopic anatomy and elements of pathology. Also, within the second year is a special course specifically designed for Inteflex students entitled "Techniques of Social Interaction."

During years three and four, the curriculum consists of a continuation of the basic sciences to medicine, the continuation of elective opportuni-

Mrs. Pearson

This article, and the survey beginning on page 205 of research at the U-M Medical School, were written especially for Michigan Medicine by Jean Pearson, Grosse Pointe.

Mrs. Pearson is distinguished former medical and science writer for the Detroit News and Detroit Free Press. She is now a full-time masters degree candidate in the University of Michigan School of Public Health, and a staff consultant with the Michigan Department of Mental Health. She holds a masters degree in education from Wayne State University, which also awarded her an honorary doctorate of humane letters. She is past president of the National Association of Science Writers.

ties for humanities courses and introductory clerkship opportunities.

Toward the end of year four, a basic clinical clerkship is planned. This basic clerkship is designed to allow students to further define their skills of interviewing and physical examination techniques. A specific Inteflex ward has been proposed to serve as the base for this experience.

By year five, the Inteflex plan calls for an intermixture of the standard curriculum and Inteflex curriculum students in 12 months of clinical clerkships.

Year six, the final year, will consist of two semesters, primarily of electives. Present plans are for a portion of the year to be spent in medically related non-medical school offerings, such as medical ethics, social problems, political issues in medicine, etc.

Though the program is geared toward a medical physician career, a student will have the freedom to switch to an allied health or science career enroute. The student will also be permitted to drop out for one year if he or she wishes either to work or to study some other subjects and return to the program without prejudice.

A document prepared this January (1975) for the Accreditation Survey Team of the Liaison Committee on Medical Education, spells out the "chief and summary goal of this program" as "to educate physicians who are scientifically competent, compassionate, and socially conscious and who bring to their profession the attitudes, abilities and knowledge acquired from a liberal education."

Development of the program is being funded by a five-year $1.4 million grant from the National Institutes of Health. State funding carries its operation. Currently, the state appropriation is $620,000 with scheduled increases calling for further annual increments to a total of $2.5 million annually. Federal support for primary care preceptorships has also been used for the "Introduction to Patient Care" course.

Though students in the program have a tendency to feel they are the elite, the Medical School faculty feels that Inteflex students are, generally, of the same caliber as those who apply and are accepted for the standard curriculum. Both are high. The 1973 Inteflex entering class, for example, had a mean high school grade point average of 3.84 (with range from 3.3 to 4.0), a mean high school rank of 96.8 percent, a SAT verbal mean of 621 and a SAT math mean of 683. (SAT: Scholastic Aptitude Test)

Dramatic Changes Ahead

While Inteflex is the most dramatic curriculum experiment in recent years at the University of Michigan Medical School, others may be in the offing. The pressure for revision is constant and the committees involved are active and innovative.

The creation of a department of family practice, for instance, may be on the horizon. And if Doctor Votaw is persuasive enough, a truly pioneering curriculum change may be undertaken.

Doctor Votaw believes that as medical knowledge and sophisticated techniques in specialties grow at an ever increasing rate, it becomes increasingly difficult, if not impossible, to teach all medical students even the primary basic information of all sub-specialties.

"I see in the long run that we are eventually just going to have to face the issue and realize that there are many different career goals among students within the medical school," he says. "We're just going to have to leave the idea that there is a common base that we teach all students. In other words, I believe we'll have to track in medical schools."

Doctor Votaw believes that there may be four general basic areas of future careers to track.

The three basic ones would be: One for the student who sees himself as being, in the future, in primary care; a second for those who are looking forward to a specialist's career, and a third for those who are interested in an academic/research career.

"You could also produce a fourth one which would be more in the line of — my slang for it is 'talkers' — pre-psychiatry for the physician whose emphasis is on the treatment pattern rather than the surgical or highly drug-oriented treatment approach," he says. "But it has been argued that he is a generalist too."

"As students come to us, they certainly aren't a homogeneous lot. They come out of different areas with different backgrounds and our assumption is that we can put them all in the same mold so that when they leave they'll all be identical — and then suddenly become heterogeneous again.

"I do believe every student should know how to do a physical exam, should know how to interview a patient, and that sort of thing. The first 1½ years in medical school would be much the same for all tracks and then, at different periods in the curriculum, the tracks would split off from the general curriculum and proceed along their own specialized direction."

What opposition does Doctor Votaw see to his proposed curriculum innovation? Tradition.

"I think," he says, "that medicine has had a long tradition that medical schools teach generalists. And that there is a perception that being a generalist means learning a little bit about a lot of areas and being able to integrate it."

The Dean Talks About Financial Needs of the University

Introduction

The medical schools of this nation now face an unprecedented set of financial uncertainties. While the public expectations regarding the schools remain high, the funds to support expansion or new programs have largely plateaued, or in many instances, declined. The public, as expressed both through state and federal government, expects medical schools to expand enrollments, undertake new kinds of training programs for physicians and physician assistants, and become more actively involved in regional arrangements for delivering health care. However, economic problems of the state and nation coupled with pressing priorities for dealing with such problems as environmental pollution have resulted in declining support for medical schools, particularly if support is measured against the general inflation which has reduced the purchasing power of the funds made available. These changes have had dramatic impact on the University of Michigan Medical School, as the school seeks to discharge its responsibilities both to the state and the nation through the continued development of a very large and complex education, research, and patient care program of high quality. This medical school is engaged in a large number of scholarly programs in addition to the two educational programs for undergraduate medical students for which it receives most of its funding. Further, its faculty provides a substantial amount of medical care for the people of the State.

Dean Gronvall

The school expanded rapidly after 1950 and continued that growth into the current decade. The reputation of the school and its faculty permitted it to acquire progressively greater amounts of funds for research, particularly federal funds, enabling the school to operate efficiently. The shift in federal funding away from rapidly increasing research money toward predominantly formula support of medical education has considerably altered the financial position of the Medical School. There are, in addition, severe physical plant problems in several areas, notably University Hospital, the Library, and faculty offices. For these reasons the Medical School of the University of Michigan cannot continue to expand its scholarly programs without a major increase in support and provision of new facilities.

Medical School Programs

Undergraduate Medical Education. The University of Michigan conducts two programs leading to the M.D. degree; the regular four year program which enrolls students after three or four years of college preparation, and the six year integrated premedical-medical program (or Inteflex) which students enter directly from high school. Total enrollment is now nearly 1,000.

House Officer Education (the intern and residency programs). Approximately 600 house officers are in training directly under the supervision of the Medical School faculty, primarily at University Hospital, the VA Hospital in Ann Arbor, and Wayne County General Hospital. In addition, the faculty assists in the education of house officers at some 15 other hospitals either through faculty visits to these institutions or by arrangements whereby the residents rotate to University Hospital for specialty experience not available elsewhere.

Continuing Education. The School has both extramural and intramural programs to assist practicing physicians and other health workers keep current with new developments in patient care. Over 15,000 people participated last year. These programs are basically self-supporting.

Dental, Nursing, and Pharmacy School Programs. Students in these programs receive a large portion of their basic science education from the medical school faculty. This effort is equivalent to about 200 medical students annually and produces added burdens on the medical faculty.

Graduate Students. Over 200 students are working toward masters or doctoral degrees, predominantly in the basic medical sciences. To a large extent the school has been able to procure external funding for these students.

Post-doctoral Students. These trainees (about 150 total) are of two types: those with advanced degrees working in basic science areas to improve their skills, and those working in clinical subspecialty areas. There is some external funding of these students.

Undergraduate Students. Since the University tries to avoid duplicate departments in several schools, the Medical School basic science faculty provides essential course work for undergraduate students. Some 2,800 students were enrolled in such courses last year.

Allied Health and Related Programs. There are three degree programs in allied health areas: the medical technology program, the physical therapy program, and the program in speech and hearing therapy. In addition, the faculty teaches students in a variety of allied health programs sponsored by the University Hospital. These programs are in jeopardy because of the absence of financial support; the medical technology program has already been reduced by half.

Research. Research is essential not only for the development of new knowledge but for the maintenance of a quality faculty. It is also needed to provide the proper atmosphere for quality education. This activity has been primarily supported by external grants and contracts, especially from the federal government.

Patient Care Programs. The clinical science faculty participates directly in patient care in University Hospital and in four core-affiliated hospitals. In addition, this faculty consults with and has assisted with patient care programs in many other hospitals through the State. These activities are supported by patient care dollars. Our mission includes not only specialty (tertiary) care, but also primary and secondary care.

Community Service. The medical faculty provides many other community services which assist the medical care system throughout Michigan. In addition to participating in state, federal, and voluntary health organizations, the school is affiliated with some thirteen community hospitals in the State of Michigan. In addition we are associated with three community-based educational corporations in Grand Rapids, Kalamazoo, and Oakland County. Through these many hospital and community relationships, the Medical School assists in the continuing education of practicing physicians, in the graduate training programs for interns and residents in these hospitals, and thereby contributes to making Michigan a more attractive place to practice medicine. The school believes these activities help recruit and retain in Michigan quality physicians who provide care for the public.

Government Funding

During the period between 1950 and the late 1960's the federal government supported medical education only indirectly by its funding of research. The University of Michigan participated actively and successfully in obtaining such new money, and over the years enjoyed an exponential increase in those resources. However, as research funds leveled off, the federal government turned more to direct support of medical education. These moneys were both for special educational projects of interest to the federal government and for basic support of medical education.

During the present year (1974-75), the total federal educational support to the University of Michigan Medical School is approximately $2.6 million. Of this, $1.7 million was received through the federal capitation grant program, which is the mechanism by which the federal government has provided direct formula support for undergraduate medical education. The remaining funds come from Special Project Grants for programs developed by the faculty of the Medical School and funded after competitive review. Included among these special project grants is the support for the statewide primary care preceptorship program which is administered through the University of Michigan Medical School. This program represents a cooperative venture on the part of the medical schools in Michigan working with the Academy of Family Physicians, the Michigan Academy of Pediatrics, and the Michigan Division of the American College of Physicians.

Federal legislation authorizing such support programs expired June 30, 1974. New legislation is now being considered in the Congress. The federal administration has expressed its desire to phase out the federal support of medical education. This would force the medical schools to increase markedly tuition in order to replace these lost revenues. While the Congress seems more favorably inclined to continue direct support, the amount of support to be received in 1975-76 (if any) is not clear. There are several versions of new legislation which would significantly reduce the total amount of federal support, while at the same time adding new program requirements in order for the schools to remain eligible for even this reduced support.

During recent years, support from the State of Michigan for education has not increased at the same rate as has federal support, nor have the increases from the state kept pace with the broadening responsibilities of the school. The state has provided its support primarily on the basis of undergraduate medical student education. The state has not recognized the extensive and growing educational commitments of the Medical School for the many other students taught, even though these other students represent in aggregate a larger total amount of education than that provided for medical students. Further, although the state has so far provided incremental support each year as the total medical student enrollment has increased (particularly with the addition of the Inteflex Program), the Governor has now recommended that the base of state support of 1975-76 be reduced below the current year. In addition, the Governor has recommended no increased support for the Inteflex Program, even though the total medical student enrollment in that program will continue to increase for the next 3 years as the program is further implemented. It seems clear that without major increases in State support, the Medical School cannot continue to expand its enrollment.

Student Enrollments in M.D. Programs

The integrated premedical-medical program admits 50 students annually and will begin its fourth year of operation in 1975. It will not be fully operational until 1979-80. Total enrollment in the regular medical program is also expanding as a result of the increase in entering class size (from 225 to 237) made in the Fall of 1972.

Projected Enrollments: Future enrollments will be dependent upon financial support, both federal and state. If enough funds and adequate facilities become available, we could continue to accept 237 into the standard program and 50 into the Inteflex Program. When these programs are stabilized and attrition allowed for, this would give a total enrollment of about 1,210 in the M.D. programs with about 255 to 260 graduates per year.

If sufficient incremental funds are not available, the School will have to face programmatic changes. If the program expansion commitments cannot be met, the School will give first priority to completing the education of all matriculated students (provided the necessary promotional criteria are satisfied). It will then examine the best approach to the program readjustments necessary to maintain the present total enrollment.

In summary, the Medical School is caught on the horns of a perplexing dilemma. Previous plans for enrollment increases now conflict with forecasts that support will in fact decline. The other horn of the dilemma is the continually rising public demand for new programs and new services, also during a time of limited or declining resources. This harsh dilemma for the University of Michigan Medical School must be resolved without compromising standards of health care.

John A. Gronvall, M.D.
Dean, University of Michigan
Medical School

Building on Impressive Accomplishments, U-M Rethinking Medical Research Process

By Jean Pearson

Physically, the University of Michigan Medical School is located at Ann Arbor.

Actually, it is spread around the world.

Its global spread stems from many sources of strength developed within the University.

The high-caliber training of its medical students, interns and residents has set standards for medical care excellence to the far corners of the nation and — with many returning to their native countries — to the far corners of the world.

U-M Research Has International Impact

The fanning out of thousands of physicians trained at the 106-year-old medical school however, is but one source of its global presence.

Another is the long reach of the medical research conducted at the University — research that constantly adds to the incremental progress of medical knowledge and improved treatment techniques.

A third is the University's participation in research that has revolutionized the approach to major, international health problems.

Jonas Salk, for example, did much of his early work at the University of Michigan. When the time came for statistical evaluation of the efficacy of the killed-virus vaccine, a team working under the direction of Thomas Francis Jr., of the University of Michigan School of Public Health, gave the word to the world.

New concepts and techniques also light the wick for advances in medicine which have global impact — perhaps with the "wick" ending up in the Smithsonian Institute. That is where the "wick" of a University of Michigan medical research project conducted at the turn of the century is now displayed.

The year was 1913. Walter Hewlett, MD, who was chairman of medicine at the U of M Medical School, ordered a newly perfected instrument for detecting and recording the minute voltage differences produced by the human heart. When the string galvanometer arrived at the University Hospital, Doctor Hewlett asked Frank N. Wilson, MD, a young assistant, to assemble the equipment.

The instrument, now on display at the Smithsonian, was one of the first in the world to produce graphic tracings of the heart's electrical activity. "Crude," however, might be today's evaluation of the method used. For patients had to immerse their hands and feet in saline-filled crocks while the electrocardiographic tracings were developed in a tiny darkroom on the floor below.

From this simple start, the electrocardiographic laboratory of the U of M Heart Station became a world center for cardiology research.

It was under the administration of Medical Dean Victor C. Vaughan, that scientific investigation at the medical school was encouraged, for the first time, in an organized way, with the allocation of time, talent and laboratory space.

Two defacto research professors, Doctor Wilson and another internist, L. H. Newburgh, MD, were appointed. Doctor Wilson's achievements in heart disease and Doctor Newburgh's precisely structured investigations into metabolism, water balance and nutrition set the pace for future breakthroughs.

Listing all of U of M's research accomplishments would provide a long roll of honor. A random few include:

- The first fiberoptic gastroscope in the world was invented in 1956 by a U of M research team from Internal Medicine and Engineering headed by H. Marvin Pollard, MD. The fiberoptic device became the prototype of a now universally-used diagnostic instrument.
- "Conn's Syndrome," hypertension produced by a tumor of the adrenal gland, was first identified at the University of Michigan by Jerome W. Conn, MD, professor emeritus of internal medicine and an international leader in endocrinology.
- Early surgical treatment of tuberculosis was pioneered at the U of M by John Alexander, MD, and replacement of disease-constricted or missing sections of the patient's esophagus was pioneered by Cameron Haight, MD.
- Development and investigative use of hyperimmune plasma and a pseudomonas vaccine which may protect patients from septicemias without the dangers of massive doses of antibiotics has, along with its other advanced therapeutic procedures, made the U of M Burn Center a national model unit.

Impressive Study Continues Today

As would research accomplishments of the past, work of the present would make an impressive list. But here, again at random, are some of the research projects underway.

In cardiovascular studies, the Cardiology Section is extending its research from investigations of the mechanical and electrical properties of the heart into some promising new areas involving blood chemistry.

Evaluation is underway of two anti-arrhythmia drugs. One is being used in conjunction with telemetric monitoring of ambulatory patients in which premature ventricular beats are recorded and counted by a computer.

Two additional blood chemistry investigations are in process. One is looking for a substance in the plasma of heart patients which causes abnormal activation of platelets and hence clotting.

An epidemiological research project is studying the association of hyperglycemia and heart disease.

Another study, being made in conjunction with Wayne State University, involves a defect observed in some patients in which red cells release oxygen at an abnormally slow rate. Emphasis is being placed on studies in patients with angina symptoms and normal angiograms.

Nearly every department and section in the U of M Medical Center is involved in cancer research. Medical oncology conducts a clinical research program for the management of patients with advanced cancer, particularly using chemotherapeutic and hormonal agents. This program includes recent adjuvant chemotherapy for solid tumors after surgery in which there is no gross evidence for malignant disease remaining but the patients are deemed to be at high risk. This would include those patients with breast cancer with positive axillary lymph nodes and also certain melanomas and sarcomas. The follow-up is too short for comment concerning results, but indications of short-term success exist in treating children with sarcomas and other solid tumors.

Immunological therapy with transfer factor is also being utilized on a research basis in a joint project of the sections of infectious diseases and oncology, in treating visible but small tumors, primarily melanomas.

Cancer research on the molecular level is being conducted by the Department of Dermatology in conjunction with its internationally known psoriasis investigation involving cyclic AMP and GMP, and their effects on abnormal mitosis of epidermis cells.

More than 300 kidney transplants have been performed at the U of M since 1964. During this period the procedure has evolved from research to the therapy of choice for end-stage kidney disease. Clinical research and use of "pulse" immunotherapy has resulted in a 90 percent one-year graft survival rate for related donor organs and about 55 percent for cadaver kidneys. The graft and patient survival rate continues to improve with research and further development of immunosuppressive drugs. Techniques for transplanting of the pancreas or its islet cells are also being perfected.

Cardiologist John Santinga, foreground, and exercise physiologist Richard Lampman monitor the heart and lung functions of a patient in the University of Michigan Hospital Exercise Laboratory. The Lab is currently conducting studies into the patterns of recuperation from heart attacks, and the role of blood lipids in heart disease.

It is believed that these techniques, together with advances in preventing rejection, may provide a breakthough in the management of severe diabetes in the not too distant future.

Research in the Department of Hematology has led to the creation of a universal blood type (artificial Type O from Types A and B) by using enzymes to alter cell antigens. Research is continuing to perfect the process for large scale use in blood banks.

Physician bioengineer teams have made impressive contributions in several major research areas. Currently, a surgeon-engineer team is evaluating a new spherocentric artificial knee it has designed. The artificial knee has demonstrated superior characteristics of stability and "natural" flexibility.

Deafness due to damage of the receptor-nerve system of the inner ear is the focus of a research project at the U of M Kresge Hearing Research Institute.

Even under normal conditions the inner ear has a very sparse blood supply since the individual capillaries are so narrow that only a single red blood cell can pass through at one time. If injured, these capillaries tend to close down, cutting off blood supply to the inner ear's delicate receptor cells and the affiliated nerves which relay sound impulses to the brain.

Purpose of the research is to learn precisely how the inner ear's blood supply is reduced in order to develop ways to stop or even to reverse the process.

Currently, the University of Michigan has $13 million in grant-supported medical research projects. Its stature in research is a tribute to the strength of its faculty, since most of the grants have been generated by individual researchers and department members.

Future Research To Be 'Targeted'

A change, however, is now taking place. At least two factors are now forcing that change. One is general disillusionment with science and technology as expected saviors of modern society. The other is that scientific knowledge has expanded so dramatically that it is often impossible for one individual to keep within his grasp all of the current information, problems and developments relevant to a major research area.

John A. Gronvall, MD, dean of the Medical School, discussing medical research recently said:

"The public now feels somewhat betrayed by its white-coated wonder workers, and it does little good to point out that their expectations were based on erroneous beliefs regarding what science can achieve and how fast it can do it.

"The fact is that a backlash has occurred and the public, through its elected representatives, is demanding a better return for its research dollars.

"This shift in attitude has already resulted in important changes in the way federal research money is given out, with more changes to come. The emphasis is moving to targeted research on a contract basis, with interdisciplinary research groups at different institutions submitting bids to the granting agencies.

"Even where contracts are not involved, funding agencies are favoring research centers and programs where specialists in a variety of areas can bring their varied talents to bear on a particular project."

Since Michigan wants to be riding the crest of the wave of the future in medical research, it has developed a strategy for achieving that goal.

The first step has already been taken through the appointment of a faculty Biomedical Research Council.

The second step, a nationwide search for an associate or assistant dean for research is underway.

"The job of the Biomedical Research Council and that of the new associate dean, will be to take the broad view of biomedical research both here and on the national scene, watching for new developments and helping the faculty to respond to them," Doctor Gronvall says.

The Council will identify the Medical Center's strengths and resources and concentrate its efforts there, primarily. This tactic will be a reflection of the national trend toward support for better organized research centers and programs and the growing emphasis on interdisciplinary research.

Research Process Key to University's Essence

A. Rees Midgley, MD, professor of pathology, is chairman of the Council. He takes a broad view of the meaning of the word "research."

"The essence of a university," he says "is looking for the truth. And I think that requires a faculty which is engaged in what I would call the research process — the scientific process — the documentation of creative ideas and the evaluation of their work.

"The real reason why a person should be at a university rather than at a teaching college should be in the area of the creative contributions which can be documented, contributions which can serve to move society forward in some fashion. This creative, documental process can be accomplished in the area of teaching, in administration, in service or in what is traditionally called basic research."

If a person claims his method is better than some other method being used, Doctor Midgley says, he should have some documentation to evaluate that conclusion and "that really consists of data and experiments to provide the data for comparison.

"I think that is the research process," he states. "What I think is wrong is that people view research as something done in a laboratory that has hot water, sinks, Bunsen burner and test tubes. I really think that research is the application of the scientific process."

Doctor Midgley said he believes promotion of faculty members should be based upon their documentable activities.

"It may be an activity is the production of a filmstrip or a method for teaching. Whatever it is, I believe it is almost imperative that the person who creates the item, or process, or device, or technique recognizes he or she has an obligation to examine and document its value."

Legislature, he claims, must be made more aware of the need for research as a function of a university and its faculty.

(Continued from page 197)

pational and recreational therapy, and a full range of psychiatric care programs. Its youth services division is located in the Children's Psychiatric Hospital.

OTHER PATIENT CARE FACILITIES

On the north side of the Huron River, the Hospital's Parkview Medical Building serves as a residential unit for chronically-ill patients, and as quarters for the inpatient Ophthalmology Service. Nearby a recently opened Riverview Building of the department of psychiatry houses a new alcoholism and drug abuse clinic for outpatients. Adjacent to the medical school on the river's city side is the Victor Vaughn House, site of aphasia and audiology clinics, also outfitted with residential facilities.

Despite the amount of space devoted to clinical care, the growing requirements for undergraduate and graduate education for all health care professionals is increasing the pressures for clinical experience beyond that available at the University Hospital. This in turn has intensified the working relationships with the University's major clinical affiliates, Veterans', St. Joseph Mercy, Wayne County General and Henry Ford hospitals. Nearly 600 U-M house officers are undergoing training at University Hospital and affiliates where they make major contributions to the patient care responsibilities of these institutions. The U-M also has active affiliations with 15 other Michigan Hospitals.

The U-M Medical Center also is increasingly occupied in educating and training technicians, therapists and other allied health professionals, none of which were formally recognized as students when the main University Hospital was occupied in 1924. Their number now exceeds 1,400.

Another expanding educational obligation is in the field of continuing education (courses beyond graduate experience for working professionals). Originally applied to physicians, this has been extended to nurses and other health care workers. Shortening of curricula and pressure for recertification at periodic intervals are expected to maintain this demand.

Although the rapid physician growth period of the U-M Medical Center is probably over, the center is still expanding — not in size, but in these kinds of new commitments — as it responds to the needs of science and society in a fast changing world.

"I know," he says, "that the legislative body believes the main function, the main goal of a university should be the teaching of its students. But I don't know how this can be done in the absence of keeping a vital faculty which is acutely attuned to what is going on.

"Further, I think if one has a faculty which is acutely aware of what's going on they have to be at that cutting edge of knowledge themselves. Whatever the cutting edge is in their specialty, they have to be contributing to that cutting edge, they have to be adding knowledge, perhaps only little bits and pieces, to their field as it advances.

"If they are at that point, then they can teach with the knowledge of what is really happening. That is where their students are going to try to be in a few years — at that cutting edge — trying to contribute something.

"So I really feel that the legislators ought to see the absolute necessity for the presence at the university of a higher quality of transmission of information. It ought to be done by a faculty which is at the cutting edge. That faculty, to be there, must devote a sizeable percentage of its effort to staying at that point. This isn't just a matter of reading textbooks written by someone else but generating those textbooks themselves and synthesizing the information in various ways. Nor can they simply synthesize, allow their students to regurgitate, and then let that be the end of the process. We just don't need that kind of a person at a university."

One step the Council has already taken to bring the faculty together into interdisciplinary groups for programs in specific research areas, Doctor Midgley reports, is to develop a computerized retrieval system of medical school faculty members' interests and capabilities. Later, it hopes to have the system extended to include all faculty members in the entire university.

Another major step being taken by the Council is identification of all areas of strength within the university's current medical research. Once identified they will be used as a base for future program development.

Doctor Midgley says that it is still too early to say where those strengths lie, but he believes some may be in the areas of reproduction, virology, immunity, membrane biology and, perhaps, aging.

The Council has already "used up one of its program options" for cancer research, Doctor Midgley says.

"We have a great amount of activity in cancer research," he notes, "but it is not well organized into a total program yet. We must bring it all together. So, for our first area of concentration the Council has recommended that major support be directed towrd developing cancer research at the University of Michigan."

MSMS Presents FMG Review Course

Foreign medical graduates coming to Michigan have a unique opportunity to prepare for U.S. licensure under a new Michigan State Medical Society-sponsored program.

Prior to taking the Educational Council for Foreign Medical Graduates (ECFMG) licensure exam, the foreign-trained doctors may enroll in a seven-week Comprehensive Medical Review Program at Oakland University.

The program, established by the MSMS Foreign Medical Graduate Committee, will be initiated June 2-July 18. Thereafter it will be offered twice a year, preceding the semi-annual ECFMG exams.

Although designed for FMGs, the review program in English and the basic sciences is open to all physicians who may benefit from intense, short-term review for other exams such as the FLEX.

It is one of few endorsed and funded by a state medical society.

The course is the result of efforts by the MSMS FMG Committee, formed after a resolution to assist foreign-trained doctors was passed by the Spring session of the 1974 MSMS House of Delegates. The committee, with Chi Pang Wen, MD, East Lansing, chairman, proposed the review program, which was approved by the MSMS Council in September.

The review program will be limited initially to 50 students. Instructors will be full-time and adjunct Oakland University faculty and prominent clinicians.

Students will be charged $200 tuition. In addition, contributions are being sought from individuals, and county medical societies. On a long-term basis, grants will be asked from agencies and foundations.

Further information may be obtained from Moon J. Pak, MD, PhD, chairman, Health Science Programs, Oakland University, Rochester, 48063.

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State Medical Journals Rate High

State medical journals received very high marks in recent months from two of the most objective and reliable of advertising readership surveys.

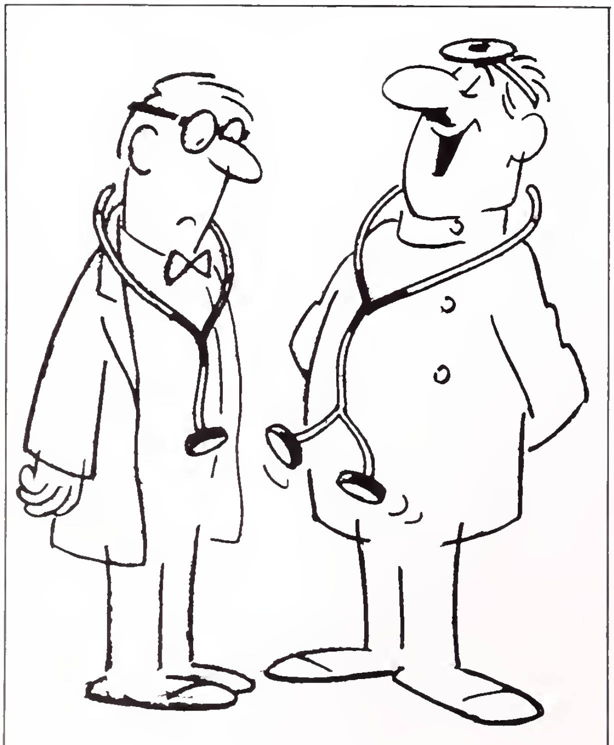
Last year, 10 of the 36 journals serviced by the State Medical Journal Advertising Group (SMJAG) were tested by a Philadelphia professional research group.

The Philadelphia group distributed valid bank checks for $5 throughout advertising pages of journals sent to a very random selection of physicians. It then recorded the number of checks cashed within 10 weeks after mailing.

During 1973 and 1974 our own state journal group and 16 of the most popular national association-sponsored and commercial medical publications were tested by this technique.

The 10 state medical journals had an extremely high average of 35%. Returns on such tests are considered good if they are between 20% and 25%. The state journal group was at the top of the list.

A further compliment and honor to state medical journals came when the Medico Media Audit conducted a reader interest study in June and July. In their testing, state medical journals headed the list of the 10 publications reviewed.



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Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

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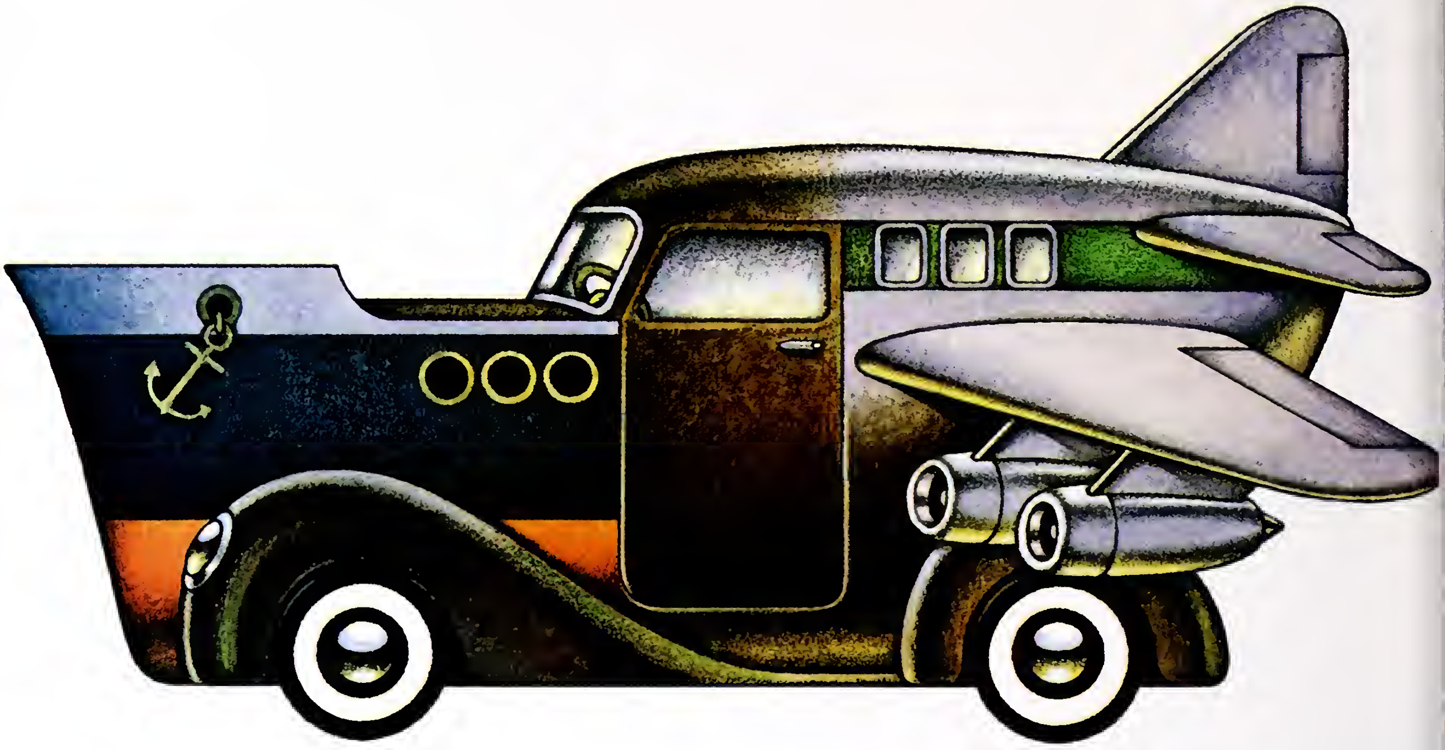

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Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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MEETINGS

April 16 – Orthopedics in Family Practice, U-M Medical Center, Ann Arbor.*

April 16 – Continuing Education conference, "Alcoholism and Drug Abuse Programs," Kellogg Center, Michigan State University, contact: Office of Conferences and Institutes, 50 Kellogg Center, East Lansing 48824.

April 17 – Spring Meeting, Michigan Psychiatric Society, honoring Jacques S. Gottlieb, MD, at Holiday Inn West, Ann Arbor, contact: Dean P. Carron, MD, 425 E. Washington St., Ann Arbor 48108.

April 18-19 – Symposium on Gynecologic Oncology, William Beaumont Hospital, contact: Ralph Margulis, MD, Department of Ob-Gyn, William Beaumont Hospital, Royal Oak 48072.

April 21-25 – American College of Physicians postgraduate course on recent progress in clinical endocrinology, co-sponsored by U-M Medical Center, at Towsley Center, Ann Arbor, contact: ACP, 4200 Pine St., Philadelphia 19104

April 22-24 – Coding and Abstracting Institute for all medical record personnel using H-ICDA, in Ann Arbor, contact: Commission on Professional and Hospital Activities, 1968 Green Road, Ann Arbor 48105.

April 24-25 – International Conference on andrology, "Human Semen and Fertility Regulation in the Male," at WSU School of Medicine, contact: E. S. E. Hafez, PhD, WSU School of Medicine, 540 E. Canfield, Detroit, 48201.

April 24-26 – Meeting of the Midwestern Association of Plastic Surgeons, Shiawassee Hotel, Southfield, contact: Burns Newby, MD, 20905 Greenfield, Southfield 48075.

April 24-27—26th Annual Convention, American Association of Medical Assistants, State of Michigan, at Ramada Inn, Benton Harbor, contact: Charlene Gunn, 2210 Ogden Ave., Benton Harbor, 49022.

April 28-29 – Human Sexuality Workshops, U-M Medical Center, Ann Arbor.*

April 28-29 – Sixth Annual Scientific Continuing Pathology Conference, U-M Medical Center, Ann Arbor.

April 29-30 – Annual Meeting, Michigan Chapter, American College of Surgeons, April 29 — 29th Annual Coller Day Residents' Competition and Banquet; April 30 — Scientific Program and Business meeting, at Towsley Center, U-M, contact: Joseph P. Elliott, MD, Michigan Chapter secretary, 2799 W. Grand Blvd., Detroit, 48202.

May 1-2 – Ophthalmology Conference, U-M Medical Center, Ann Arbor.*

May 1-2—18th Annual Clinic Days, "Pediatric Hematology, Oncology, Immunology and Pathology," honoring Wolf W. Zuelzer, MD, sponsored by Children's Hospital of Detroit and WSU Department of Pediatrics, at the hospital, contact: Jeanne M. Lusher, MD, chairman, Children's Hospital of Michigan, 3901 Beaubien Blvd., Detroit, 48201.

May 4 – The Council, Michigan Inn, Southfield, contact: Warren Tryloff, director.

May 4-6 – MSMS House of Delegates, Michigan Inn, Southfield, contact: Richard Campau, MSMS Headquarters.

May 5-7 – Annual Meeting, MSMS Auxiliary, Troy Hilton, contact: Phyllis Jones, president, 15839 Crescent Drive, Allen Park 48101.

May 6-10 – Tutorial session clinical cardiology, Henry Ford Hospital, limited enrollment, contact: Sidney Goldstein, MD, Head, Division of Cardiovascular Disease, Henry Ford Hospital, Detroit 48202.

May 7-8 – PAS and MAP tutorial sessions, including PSRO legislation, at headquarters, Commission on Professional and Hospital Activities, contact: CPHA, 1968 Green Road, Ann Arbor 48105.

May 10 – All-day Scientific Session, Michigan Society of Anesthesiologists, Sheraton Southfield (formerly Shiawassee Hotel), contact: Eli Brown, MD, 6767 W. Outer Drive, Detroit, 48235.

May 10 – Seminar, "Patterns in Viral Hepatitis," Michigan Society of Pathologists, St. Mary Hospital, Grand Rapids, contact: Robert Hendrix, MD, Department of Pathology, U-M, Ann Arbor 48104.

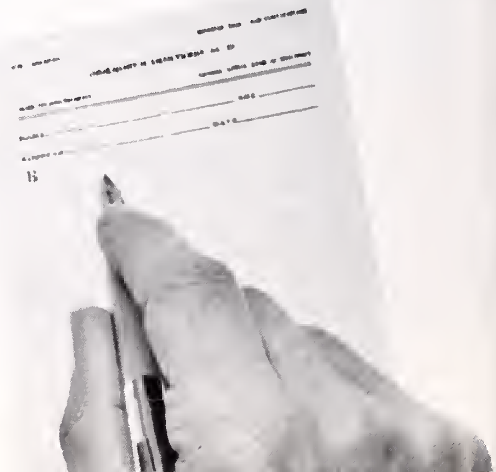
May 12-16–Educational course, "Advanced Techniques for the Health Record Analyst," at headquarters, Commission on Professional and Hospital Activities, contact: CPHA, 1968 Green Road, Ann Arbor 48105.

May 13-14–Postgraduate course in treatment and drug therapy, U-M Medical Center, Ann Arbor.*

May 16-17—Symposium, "Soft Tissue Sarcomas," sponsored by American Cancer Society and Wayne State University, at Webber Auditorium, Harper Hospital, contact: Ralph Pickett, American Cancer Society, 1205 E. Saginaw, Lansing, 48906.

(Continued on page 218)

Bioequivalence



the weight of scientific opinion:

If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that product's safety and effectiveness simply because the chemical content was the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalency in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.

DRUG
BIOEQUIVALENCE

A REPORT OF THE
OFFICE OF TECHNOLOGY ASSESSMENT
DRUG BIOEQUIVALENCE STUDY PANEL

"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:
(a) chemical equivalence; and
(b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or
(c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...

P·M·A
Pharmaceutical Manufacturers
Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

protecting the integrity of your prescription

---

*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

May 21—107th Annual Reunion, WSU School of Medicine Alumni Association, at Sheraton-Southfield (formerly Shiawassee) Hotel, Southfield, contact: Alumni House, Wayne State University, Detroit, 48202.

May 21-23—Michigan Public Health Association, annual meeting, Pantlind Hotel, Grand Rapids, contact: Barbara Clark, program chairman, 1800 Kales Bldg., 76 W. Adams, Detroit 48204.

May 28 – Seminar on Medicine and Law (Malpractice), Institute for Continuing Legal Education, U-M Medical Center, Ann Arbor.*

June 2-July 18—MSMS Comprehensive Review Program for FMGs, sponsored by MSMS, at Oakland University, contact: Health Science Programs, Oakland University, Rochester, 48063.

June 3-5–Annual Meeting, Michigan chapter, American Academy of Pediatrics, Bay Valley Inn, contact: Charles Coffman, executive secretary, 4791 Haddington Drive, Bloomfield Hills 48013.

June 3-6–Postgraduate course in advances in internal medicine, U-M Medical Center, Ann Arbor.*

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June 3-7–One-week tutorial session in clinical cardiology, Henry Ford Hospital, limited enrollment, contact: Sidney Goldstein, MD, head, Division of Cardiovascular Disease, Henry Ford Hospital, Detroit 48202.

June 11–The Council, MSMS headquarters, contact: Warren F. Tryloff, director.

June 11-12–PAS and MAP tutorial session, including PSRO legislation, at headquarters, Commission on Professional and Hospital Activities, contact: CPHA, 1968 Green Road, Ann Arbor 48105.

June 15-19–AMA Annual Convention, Atlantic City.

June 16-20–Educational course, "Advanced Techniques for the Health Record Analyst," at headquarters, Commission on Professional and Hospital Activities, contact: CPHA, 1968 Green Road, Ann Arbor 48105.

June 20-21 – Upper Peninsula Medical Society, Holiday Inn, Marinette, Wis., contact: Harold P. Brukardt, MD, chairman, 534 First St., Menominee, 49858.

June 20-21—Annual Keyport Trauma Day, Otsego Ski Club, Gaylord, contact: Benjamin E. Henig, MD, 604 Peninsular, Grayling, 49738.

June 23-29–Northern Michigan summer postgraduate education course for physicians, sponsored by U-M Medical Center, at Shanty Creek Lodge, Bellaire.*

July 24-25—Annual Coller, Penberthy, Thirlby Conference, Park Place Motor Inn, Traverse City, contact: Laurence P. Skendzel, MD, Munson Medical Center, Traverse City, 49684.

Aug. 2 – The Council, Bay Valley Inn, Bay City, contact: Warren F. Tryloff, director.

Aug. 9-13–Annual meeting and scientific assembly, Michigan Academy of Family Physicians, Park Place Motor Inn, Traverse City, contact: Rita Feldkamp, executive secretary, 933 Wing St., Plymouth 48170.

Sept. 13 – September Seminar, "Pathology of the Breast," Michigan Society of Pathologists, St. John Hospital, Detroit, contact: Robert Hendrix, MD, Department of Pathology, University of Michigan, Ann Arbor 48104.

Sept. 24–The Council, MSMS headquarters, contact: Warren F. Tryloff, director.

Nov. 11-13 – 1975 MSMS Annual Scientific Meeting, Michigan Inn, Southfield, contact: Helen Schulte, MSMS headquarters.

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*Contact Robert K. Richards, Towsley Center, University of Michigan, Ann Arbor 48104.

The post-T & A patient:
another type for TYLENOL® acetaminophen products

When the post-T & A patient requires an analgesic, a new problem arises. Hemorrhagic tendencies following the use of aspirin after tonsillectomies have been reported.[1,2] In a patient who "...has recently undergone a surgical procedure or has another underlying hemostatic defect, aspirin ingestion may cause significant bleeding.... Aspirin is absolutely contraindicated in such situations. Acetaminophen...could replace aspirin in these instances."[3]

The post-T & A patient is only one of several 'types for TYLENOL' antipyretic-analgesic products—that is, patients who should avoid aspirin. Considering *all* of them, wouldn't it provide added safety (as well as added convenience) to recommend TYLENOL products routinely for simple analgesia?

References: 1. Reuter, S.H., and Montgomery, W.W.: Arch. Otolaryng. *80*:214-217 (Aug.) 1964. **2.** Osol, A., et al., ed.: The United States Dispensatory and Physicians' Pharmacology, ed. 26, Philadelphia, J.B. Lippincott Co., 1967, p. 171. **3.** Schwartz, A.D., and Pearson, H.A.: J. Pediat. *78*:558-560 (March) 1971.

Precautions and Adverse Reactions: If a rare sensitivity reaction occurs, the drug should be stopped. Acetaminophen has rarely been found to produce any side effects.

Elixir, 120 mg./5cc. (alcohol 7%).
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After One Year of Work

MSMS Negotiating Committee To Recommend Non-Participation

The MSMS Negotiating Committee with Third Party Carriers has been at work for a year attempting to fulfill its goals of establishing a single coding system and uniform claim form, eliminating regionalization of fees and providing physicians with regular updating of their profiles.

The following is the summary of their year's activities, along with their recommendations for action by the MSMS House of Delegates. Their entire 100-page report will be presented to the House during the Annual Session May 4-6 in Southfield.

Single Coding System

For years Michigan physicians have been concerned about office time spent contending with several different coding systems; the American Medical Association's Current Procedural Terminology (CPT), the National Association of Blue Shield Plans (NABSP), the old Michigan Blue Shield (MBS), and private insurance carriers.

In addition to the procedural codes, some insurance claim forms also require use of a diagnostic code.

MSMS House of Delegates Resolution 74A-3 charges this Committee to establish, through negotiation, the use of a single coding system for Michigan acceptable to all physicians and insurance carriers.

The various coding systems were compared, and discussions held with Medicaid (the Michigan Department of Social Services), Medicare, Blue Shield, and the Health Insurance Association of America.

After thorough study, the Committee has decided to recommend (a) the continued use of the HICDA diagnostic code, and (b) adoption of the AMA CPT as the single procedural code, for the following reasons:

1. The CPT is the most extensive code and thus makes it possible for physicians to more accurately designate the exact procedure performed. The less extensive NABSP and MBS codes force the doctors to lump their procedures into more general categories which makes it difficult to differentiate between a more complicated or less involved procedure.

2. The PSRO National Advisory Council has recommended to HEW the use of the CPT for all PSROs in the nation. If CPT becomes the official PSRO code, it is reasonable to expect it will also be the official code if national health insurance is mandated by Congress.

3. The Health Insurance Association of America has indicated the CPT is acceptable, and stated in a July 31, 1974 letter to this Committee, ". . . companies in the Health Insurance Association of America use several different codes, very often the AMA's CPT coding. None . . . uses the NABSP."

4. Medicaid has indicated its willingness to submit a request to HEW for conversion of its equipment to the CPT and feels chances are good their request will be granted if the CPT becomes the *single* coding system in Michigan.

5. Although Blue Shield says conversion to CPT would be too expensive, (involving direct costs of at least $350,000 and indirect costs as much as $750,000), these costs could be cut dramatically if Blue Shield installed equipment which would translate the CPT coding to NABSP for their use.

The Committee transmitted its preference for the CPT in a Special Report to The Council, recommending (1) "That The Council approve a deadline of July 1, 1975 for conversion to the AMA's CPT Code as the single coding system to be used on all health insurance forms in Michigan," and (2) "That The Council communicate to all parties involved that MSMS has adopted the CPT procedural code and instruct all MSMS members to use the CPT code commencing July 1, 1975." The Committee's Special Report and its recommendations were approved by The Council on Dec. 11, 1974.

The Council has notified the carriers of its approval of July 1 for conversion to the CPT as the single coding system for Michigan and is awaiting replies. In the meantime, the Committee recommends *the House of Delegates give impetus to the efforts of this Committee and The Council by also voicing its acceptance of the CPT as the single procedural code and the HICDA as the single diagnostic code.*

Resolution 74A-3 further said if these objectives cannot be accomplished through negotiation, the Committee may recommend to The Council such action as statewide non-participation by members of MSMS, legal action, or other appropriate courses of action deemed necessary.

Therefore, the Committee further recommends that the House of Delegates instruct the MSMS Committee on State Legislation and Regulations to petition the Office of the Insurance Commissioner and/or seek legislation mandating the use of the CPT procedural code and the HICDA diagnostic code in Michigan, if voluntary acceptance of the codes is not forthcoming from the third party payors in Michigan by January 1, 1976.

UNIFORM CLAIM FORM

All physicians in Michigan are aware of the frustrations their office personnel suffer filling out different kinds of insurance claim forms.

Therefore, the House of Delegates stipulated "the use of a uniform health insurance claim form by all third party payors" as one of the subjects of the Negotiating Committee.

The Committee began its study of claim forms at its first meeting on June 12. Ideally, it would have preferred to recommend adoption of a simple form which would have required physicians to submit only the most basic information: identification of patient, service rendered, date of service, the cost, and physician's name. But, the health care delivery system has become too complicated, and the Committee realized that third party payors must have more information if they are to process claims quickly enough to reimburse subscriber and/or physician in a reasonable length of time.

After several meetings with representatives from the third party carriers, the Committee on Jan. 15 finally approved a claim form designed by the Michigan Department of Social Services' Medical Assistance Office, based on the AMA's proposed uniform claim form but containing all the features required by Michigan carriers. The form accepted by the Committee is called here "Prototype 4."

At that time, all the carriers seemed to agree that Prototype 4 could be used:

1. The HIAA representatives said their major concern was that there be one form used throughout the country, rather than each state developing its own. The Committee explained it was its intention to submit its uniform claim form to the AMA in the hope of persuading them to accept the refinements MSMS has made.

2. The Blue Shield representative told the Committee the new equipment being installed by Shield would permit it to accept any form that had all the elements needed to process the claim (this included Prototype 4). In addition, Blue Shield offered to field test the form for MSMS.

3. Medicaid, of course stated the form was fine.

It was agreed by all representatives on January 15 that, pending any unforeseen problems revealed in the field testing, the uniform claim form could be implemented by Sept. 1, 1975. The Medicaid representatives said they would prepare a final draft of Prototype 4, with bar coding to customize it for each carrier, for the next meeting of the Committee.

The final draft of Prototype 4 was presented to the Committee and the carrier representatives one month later, on February 12, and the representatives again were invited to comment:

1. The HIAA representative, from the main office in New York, said they prefer the AMA claim form. In spite of the Committee's efforts to explain that the AMA form could not be used by Medicaid, Blue Shield, or Medicare in Michigan, the HIAA representative said they planned to recommend its use to HIAA members in Michigan.

2. A different Blue Shield representative, at the Feb. 12 meeting, in a total reversal of previous commitments, said that the new Blue Shield equipment could not accept Prototype 4; that it would only be used for processing pharmaceutical forms. He also said since Blue Shield's equipment cannot accept Prototype 4, it would not be feasible for Shield to field test the form.

3. Medicaid offered to make further modifications in the form.

The Committee believes further modifications in Prototype 4 are not indicated. The form can be received by the most sophisticated optical scanning computer systems, contains all the elements required by all Michigan carriers, and has been bar coded to customize its easy use for each carrier.

The Committee regrets the HIAA representative would not endorse Prototype 4, since his decision appeared to be based on personal preference rather than the form's merits. The alternative he recommended for use (the AMA proposed uniform claim form) in Michigan cannot be used by either Medicaid, Blue Shield, or Medicare.

Every effort has been made to encourage Blue Shield to have specific input into the development of a uniform claim form for Michigan, but to this date no definitive recommendations or mockup claim forms have been submitted.

The Committee can only conclude that Blue Shield has no intention of cooperating in joint efforts, in order to force Michigan doctors to continue to use its form.

Your Committee feels that further negotiating attempts are futile: and recommends *the House of Delegates adopt Prototype 4 as the uniform claim form for Michigan.*

The Committee further recommends that the House of Delegates instruct the MSMS Committee *on State Legislation and Regulations to (1) petition the Office of the Insurance Commissioner and/or (2) seek legislation mandating Prototype 4 as the uniform claim form in Michigan, if voluntary acceptance of the form is not forthcoming from the third party payors in Michigan by Jan. 1, 1976.*

Unfair Reimbursement Practices

In any discussion of unfair reimbursement practices, two subjects inevitably come up: physician profiles and regionalization of fees.

The Negotiating Committee has addressed itself to these two subjects during the past months. Task Forces to study each were appointed in July, meetings were held, and recommendations submitted to the full Committee in September.

Following are recaps on what has transpired during our negotiations on each subject.

Physician Profiles

On Sept. 11, the Task Force on Physician Profiles recommended the Committee negotiate with Blue Shield the suggestion that (1) all physicians annually be sent a copy of their current profiles and (2) that physicians' fees automatically be updated by Blue Shield, based on figures submitted routinely on claim forms.

On Oct. 8, Blue Shield promised a written report on these matters in 30 to 60 days. No report was ever received.

On Jan. 15, Blue Shield expressed doubt that it could automatically update physician profiles, based on current charges, and still keep within its cost containment program. So, the Committee, offering to compromise, asked if Blue Shield at least could work out a technique to annually and automatically send physicians their current profiles, so the physicians, themselves could update their profiles.

The Committee was assured a proposal would be presented at the next meeting.

Instead, on Feb. 5, the Committee received a letter from Blue Shield stating, "We feel that it is essential that we continue our current policy of providing profiles upon request and at the time that a profile change is requested. Therefore, the provision of profiles on an annual basis in addition to our current distribution — would be unnecessary additional administrative cost. We are also concerned that the annual distribution of the profile

(Continued on page 225)

THE UNIVERSITY OF TOLEDO LAW REVIEW ANNOUNCES: A COLLOQUIUM,

IMPACT OF FEDERAL REGULATION
on the
HEALTH DELIVERY SYSTEM

TO BE HELD MAY 1–3, 1975 AT THE LAW CENTER, THE UNIVERSITY OF TOLEDO

The purpose of the Colloquium is to define, and propose solutions to, the administrative, legal and medical problems which recent federal legislation will create. The Colloquium will offer a critical analysis of the new legislation from the vantage points of the primary groups functioning in the health delivery system.

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Enclosed is a check (payable to The University of Toledo) for $ ________ to cover ________ registrations (registration fee is $75.00 per person) for the 1975 Colloquium: IMPACT OF FEDERAL REGULATION ON THE HEALTH DELIVERY SYSTEM May 1, 2 and 3, 1975.

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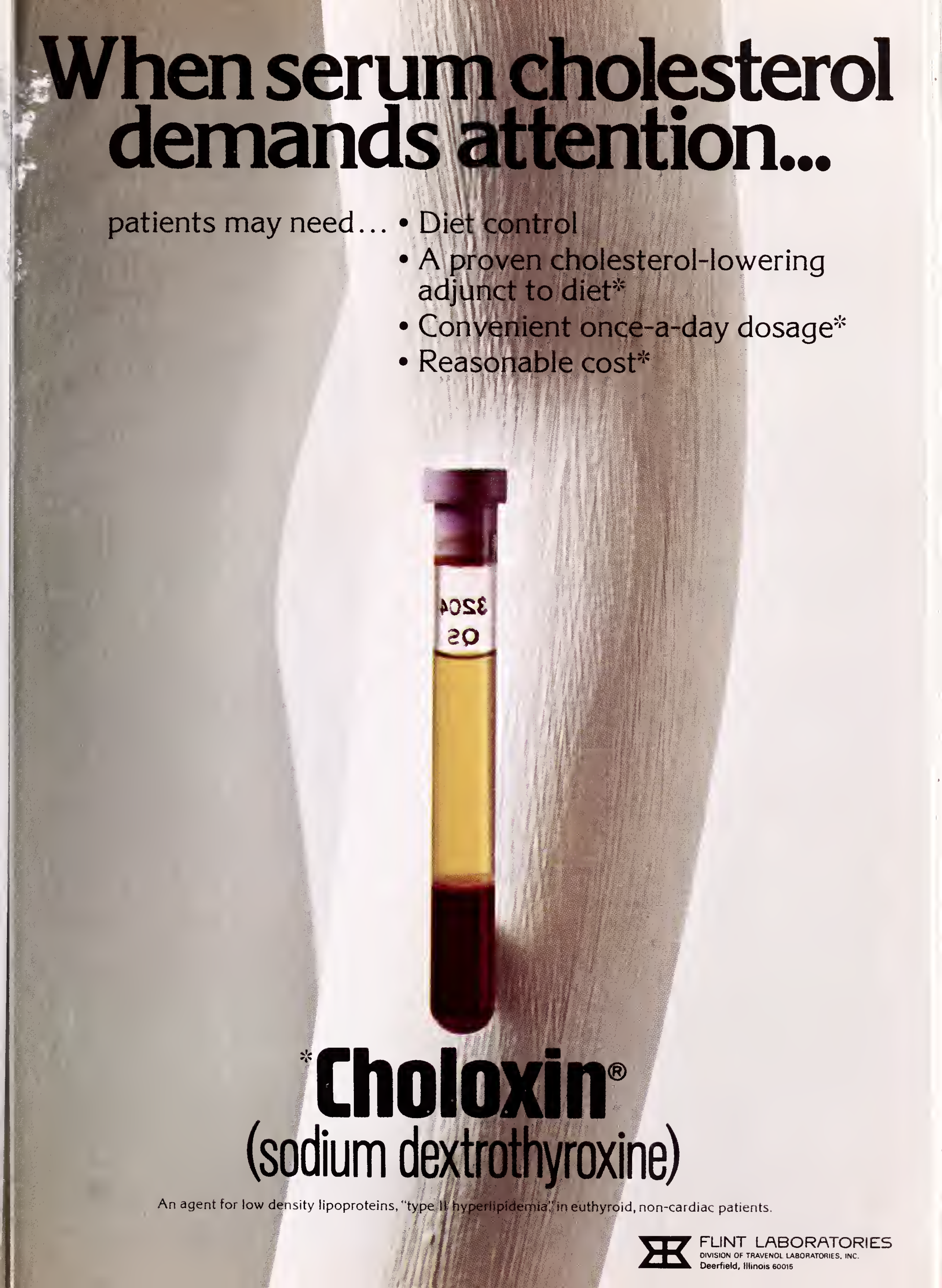

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Four strengths . . . 1, 2, 4, and 6 mg. . . . are available making the scored tablet regimen a flexible dosage system. And, for most patients, CHOLOXIN tablets offer once-a-day dosage.

AN IMPORTANT NOTE:
It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

CHOLOXIN® (sodium dextrothyroxine) Single-Tablet-A-Day Dosage Schedules

See prescribing information in package insert reproduced below.

	Starting Dosage	Increased Monthly by	Usual Maintenance	Maximal Recommended
Adult Hypercholesterolemic	1.0-2.0 mg.	1.0-2.0 mg.	4.0-8.0 mg.	4.0-8.0 mg.
Pediatric Hypercholesterolemic	0.05 mg./kg. body weight	0.05 mg./kg.	0.1 mg./kg. body weight	4.0 mg.
Hypothyroid Cardiac	0.5-1.0 mg.	1.0 mg.	4.0 mg.	4.0 mg.

Choloxin®
(sodium dextrothyroxine)

Description
CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine. It is chemically described as D-3,5,3′,5′-tetraiodothyronine sodium salt.

Actions
The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

Most of the available evidence indicates that CHOLOXIN stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces. Cholesterol synthesis is not inhibited and abnormal metabolic endproducts do not accumulate in the blood.

Indications
This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease.

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication.

Before prescribing, note the following: Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively in patients with significant myocardial impairment. CHOLOXIN dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications
The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease, including angina pectoris; history of myocardial infarction; cardiac arrhythmia or tachycardia, either active or in patients with demonstrated propensity for arrhythmias; rheumatic heart disease; history of congestive heart failure; and decompensated or borderline compensated cardiac status.
2. Hypertensive states (other than mild, labile systolic hypertension).
3. Advanced liver or kidney disease.
4. Pregnancy.
5. Nursing mothers.
6. History of iodism.

Warnings
CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care. Special consideration of the dosage schedule of CHOLOXIN is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels. Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN. As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients, and in surgery in hypothyroid patients in whom it may be advisable to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who had required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age
Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug; it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions
It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly, they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHOLOXIN for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions
The side effects attributed to dextrothyroxine therapy are, for the most part, due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient, although its relationship to CHOLOXIN therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN; a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration
For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN is approximately 0.1 mg per kilogram. The initial daily dosage should be approximately 0.05 mg per kilogram to be increased in up to 0.05 mg per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

How Supplied
CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4, and 6 mg tablets.

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amounts to an annual request to physicians to review and "update" those profiles. For those reasons, we cannot grant your request for annual distribution of physicians' customary profiles." Blue Shield representatives restated this position at the Feb. 12 meeting of the Negotiating Committee.

Your Committee is greatly displeased at Shield's position because it puts the onus for keeping profiles up-to-date on the physician in spite of the fact that Blue Shield already has information on the physician's current UCR on file but refuses to make use of it.

In addition, because Blue Shield does not keep its records up-to-date on physicians' current UCR, subscribers are often told the doctor is overcharging them when he is not. And, to add insult to injury, Blue Shield tells the subscriber they will support him if he chooses to bring suit against the physician (this is when Blue Shield *knows*, if they would only consult their own records, that the physician is not overcharging).

To top it off, physicians end up subsidizing Blue Shield each year because of the money Shield saves by paying less than the doctors' UCR fee due to outdated profiles.

Regionalization of Fees

The Task Force on Regionalization of Fees' primary recommendation to the Committee in September was that the Committee negotiate with Blue Shield to abolish regional screens.

The Committee accepted the Task Force's report and invited Blue Shield to present their point of view on Oct. 8. At that meeting, Blue Shield said that in order to abolish regional screens and still keep within its cost containment program, it would have to reduce payments to physicians in Region 1. The Committee recommended that Shield develop a formula to eliminate screens which would not alter its overall dollar payout, and further suggested that such a plan might be implemented over a period of two or three years to minimize its impact on Region 1.

No written proposal on how Blue Shield could implement the abolition of regional screens within its cost containment program was ever received. However, the Committee was assured on Jan. 15 that a report would be presented to the Committee at its next meeting.

Instead, on Feb. 5, the Committee received a letter stating that since such action would constitute a change in Blue Shield Board policy, it would be necessary for the new Board to act.

On Feb. 12, Blue Shield again said it could not submit a plan to abolish regional screens but did suggest it might reconsider if MSMS could guarantee no decrease in per-case participation in Region 1. They complained that MSMS had not contacted the physicians in Region 1, to determine the impact of such a proposal. However, the Blue Shield representatives were reminded that MSMS still has not received the Blue Shield proposal on which to base a poll!

Conclusion

The Negotiating Committee with Third Party Carriers has spent several months meeting with representatives from the insurance carriers in Michigan and all, *except Blue Shield*, have demonstrated a genuine desire to cooperate with the Committee in seeking viable solutions to problems of mutual concern.

In view of this, the Committee feels MSMS should continue to negotiate with the representatives from the Department of Social Services (Medicaid), Medicare and the Health Insurance Association of America, but cease any further negotiations with Blue Shield until it can show tangible evidence of a willingness to cooperate and to negotiate in good faith.

After all this time, the Committee can only conclude from the unyielding position taken by Blue Shield that any further attempts to negotiate with them on these matters are futile.

The recalcitrant attitude of Blue Shield on the subjects of regionalization of fees and physician profiles, coupled with what appears to be a total lack of willingness to cooperate with MSMS in the development of a uniform claim form or even consider the use of CPT procedural code, can only bring the Committee to one logical conclusion: Blue Shield apparently has no intention of ever compromising on, or cooperating with, MSMS on any of the issues we have discussed with them during the past year.

Therefore, the Negotiating Committee with Third Party Carriers recommends *the House of Delegates urge: (A) All MSMS members who have a formal participation agreement with Blue Cross-Blue Shield to notify same, by letter, that they no longer will participate, these letters to be mailed to MSMS, in care of the Negotiating Committee with Third Party Carriers, which will have the option of exercising the non-participation "proxies" upon 10-day advance notice to the physician; (B) All members to not submit any Doctor's Service Report "Payment to Doctor" claim forms for services rendered to Blue Cross-Blue Shield; (C) All MSMS members to continue submitting Doctor's Service Report "Payment to Subscriber" claim forms, duly signed by the subscriber (or patient) and the physician; and (D) All MSMS members to not take any "per case payment," as this could be construed as "participation" by Blue Cross-Blue Shield.*

Monthly Surveillance Report

Cases of Certain Diseases
Reported to the Michigan Department of Public Health
For the Four Week Period Ending February 28, 1975

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

	1975 This 4-Week Period	1974 Same 4-Week Period	1975 Total To Above Date	1974 Total Same Date	Total Cases for 1974
Rubella	212	128	316	274	1,388
Cong. Rubella Syndrome	1	0	1	0	1
Measles	419	309	571	476	2,365
Whooping Cough	7	5	23	14	104
Diphtheria	1	0	1	0	0
Mumps	1,347	888	2,612	1,808	7,230
Scarlet Fever & Strep Sore Throat	3,073	5,482	5,806	9,730	31,802
Tetanus	0	0	0	1	6
Poliomyelitis (Paralytic)	0	0	0	0	2
Hepatitis	219	304	517	717	3,599
Salmonellosis (other than S. typhi)	66	87	155	224	1,001
Typhoid Fever (S. typhi)	2	1	2	2	11
Shigellosis	49	117	156	210	1,436
Aseptic Meningitis	8	12	15	26	162
Encephalitis	7	2	11	4	69
Meningococcic Meningitis	8	4	18	8	54
H. Influenza Meningitis	10	12	23	27	121
Tuberculosis	117	74	150*	206	1,431*
Syphilis	132	328	275	642	2,659
Gonorrhea	2,381	2,469	5,311	5,626	32,152

Information can be supplied by the local health department on the local incidence of disease.

Maurice Reizen, M.D., Director
Michigan Department of Public Health

*Corrected totals.

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DESCRIPTION: Methyltestosterone is 17β-Hydroxy-17-Methylandrost-4-en-3-one. **ACTIONS:** Methyltestosterone is an oil soluble androgenic hormone. **INDICATIONS:** In the male: 1. Eunuchoidism and eunichism. 2. Male climacteric symptoms when these are secondary to androgen deficiency. 3. Impotence due to androgenic deficiency. 4. Postpuberal cryptorchidism with evidence of hypogonadism. Cholestatic hepatitis with jaundice and altered liver function tests, such as increased BSP retention and rises in SGOT levels, have been reported after Methyltestosterone. These changes appear to be related to dosage of the drug. Therefore, in the presence of any changes in liver function tests, drug should be discontinued. **PRECAUTIONS:** Prolonged dosage of androgen may result in sodium and fluid retention. This may present a problem, especially in patients with compromised cardiac reserve or renal disease. In treating males for symptoms of climacteric, avoid stimulation to the point of increasing the nervous, mental, and physical activities beyond the patient's cardiovascular capacity. **CONTRAINDICATIONS:** Contraindicated in persons with known or suspected carcinoma of the prostate and in carcinoma of the male breast. Contraindicated in the presence of severe liver damage. **WARNINGS:** If priapism or other signs of excessive sexual stimulation develop, discontinue therapy. In the male, prolonged administration or excessive dosage may cause inhibition of testicular function, with resultant oligospermia and decrease in ejaculatory volume. Use cautiously in young boys to avoid premature epiphyseal closure or precocious sexual development. Hypersensitivity and gynecomastia may occur rarely. PBI may be decreased in patients taking androgens. Hypercalcemia may occur, particularly during therapy for metastatic breast carcinoma. If this occurs, the drug should be discontinued. **ADVERSE REACTIONS:** Cholestatic jaundice • Oligospermia and decreased ejaculatory volume • Hypercalcemia particularly in patients with metastatic breast carcinoma. This usually indicates progression of bone metastases • Sodium and water retention • Priapism • Virilization in female patients • Hypersensitivity and gynecomastia. **DOSAGE AND ADMINISTRATION:** Dosage must be strictly individualized, as patients vary widely in requirements. Daily requirements are best administered in divided doses. The following is suggested as an average daily dosage guide. In the male: Eunuchoidism and eunuchism, 10 to 40 mg.; Male climacteric symptoms and impotence due to androgen deficiency, 10 to 40 mg.; Postpuberal cryptorchism, 30 mg. **HOW SUPPLIED:** 5, 10, 25 mg. in bottles of 60, 250.

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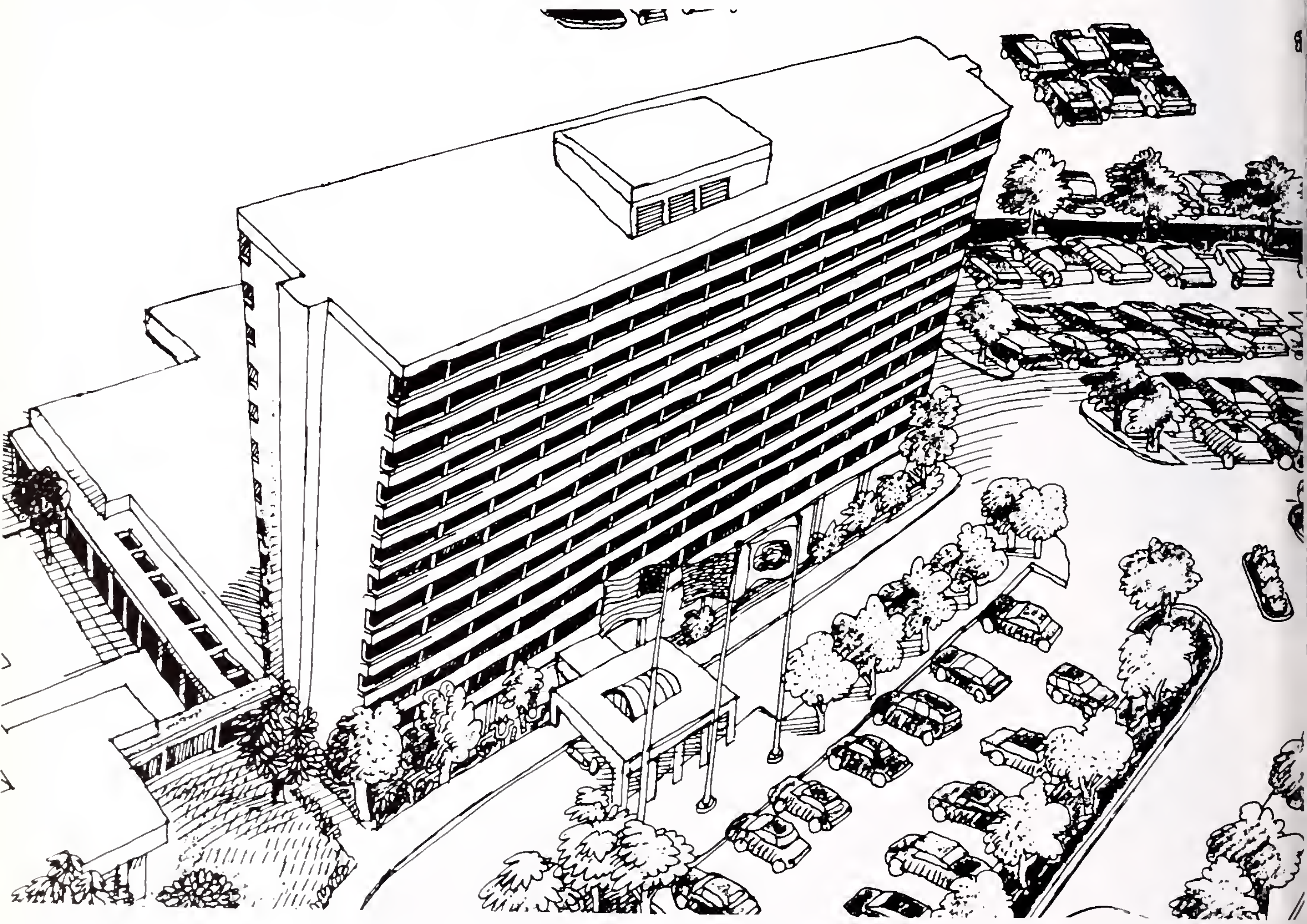

IT'S NEW

Michigan Inn, Southfield

These Doctors Among Hardest Hit By Professional Liability Insurance Crisis

(Prepared by MSMS Staff)

Kalamazoo doctor **Harold Machin, MD,** has decided to give up his specialty area of surgery rather than pay a professional liability insurance premium of $20,000 annually. He will continue to maintain only an office practice. Losing the services of specialists in other high-risk specialties is a distinct possibility in Kalamazoo, warned Robert Fabi, MD, one of Kalamazoo's few neurosurgeons. He has already investigated a practice in Canada should he be unable to continue his malpractice insurance.

* * *

***Douglas H. Giese, MD,** who as president of the Muskegon County Medical Society two years ago tried to warn the community that the professional liability insurance situation soon would hit the public, has stopped doing orthopedic surgery. Faced with a new insurance premium of $14,000 for 1975, Doctor Giese decided to stop his hospital practice and all surgery and to see patients only in his office. He is doing insurance examinations and consulting work, etc.*

* * *

Dennis C. Bradley, MD, is a young obstetrician-gynecologist and native of Michigan who has left the state because he could not get professional liability insurance as a new physician. Doctor Bradley, who received his degree from the University of Michigan, had planned to enter practice with F. J. Schrader, MD, of Jackson. Instead, he made the decision to enter a group practice in Denver, where he was able to obtain insurance protection. Doctor Schrader reported his disappointment recently in a letter to Governor Milliken.

* * *

*The doctor who for many years was chairman of the Michigan State Medical Society Committee on Maternal and Perinatal Health has retired at age 60 rather than pay high premiums for professional liability insurance. **William W. Jack, MD,** Grand Rapids obstetrician-gynecologist, has retired after 32 years of practice.*

* * *

William Arthur Belding, MD, is a certified pathologist in the Dickinson-Iron County area of Michigan's Upper Peninsula. He cannot begin medical practice because no insurance company in the state is writing policies for new doctors.

*The Macomb County patients who had been cared for by **Norman Wilson, MD,** Mt. Clemens, must find a new orthopedic physician. Doctor Wilson closed his practice in December when his insurance was not renewed. He took a position as an industrial physician in a factory.*

* * *

Rong C. Yang, MD, an obstetrician-gynecologist, moved his practice from Allegan County to Texas after he was unable to obtain professional liability insurance at a reasonable rate. Despite the fact that no evidence of malpractice was found in three suits pending against him, and dismissal of the cases, his insurance carrier cancelled his policy. The only new coverage he could obtain was at a cost of $12,000 per year.

* * *

*Traditionally, physicians gradually reduce their patient load when they retire, but **Arthur M. Rothman, MD,** Mt. Clemens, decided late in 1974 to retire completely rather than pay rising premiums and face the other increasing costs of practice. Doctor Rothman had been a busy family physician for 47 years.*

* * *

Three young anesthesiologists may be unable to join the staff of Mount Carmel Mercy Hospital, Detroit, in June because they cannot get professional liability insurance. They are finishing their residencies at Providence Hospital, the University of Michigan, and the Mayo Clinic, Rochester, Minnesota.

* * *

*Roseville, north of Detroit, needs more doctors, not fewer doctors. But the community has one less since **James H. Jewell, MD,** retired prematurely in January because his professional liability premium and other costs were climbing too high. Doctor Jewell is an obstetrician-gynecologist.*

* * *

Among the growing number of Michigan physicians who are leaving the actual practice of medicine is **Chris H. Southworth, MD,** a general surgeon, who has retired and taken a position with the American College of Surgeons as an inspector.

* * *

Two Muskegon orthopedic surgeons closed their office in March rather than pay a malpractice insurance premium which increased 500 percent in one *year. The two men,* ***Leland L. Swenson, MD,*** *and* ***John Folsom, MD,*** *were asked to pay $42,000 for their premium, due March 10.*

Doctor Folsom stated "I will not pay that exorbitant fee to practice in the state of Michigan." Doctor Swenson has been practicing for a quarter of a century with only one suit filed against him. It was settled out of court years ago. Both doctors are named in a suit that is pending. When their office was closed, only one orthopedic surgeon was available in the Muskegon area, and his insurance comes up for renewal in May.

* * *

Five corporations of emergency physicians who serve patients at Grand Rapids, Holland, Douglas and Muskegon have decided to forego group malpractice insurance because of excessive cost. Their annual corporation premiums have increased from $7,500 to $92,057 for 1975. That sum amounts to about 10 percent of their fees, excluding the uncollectable ones. Although the physician corporations have handled almost half a million patients, only three suits have been filed against them, none of which has come to trial. The insurer has never paid a malpractice claim in the seven years in which the corporations have practiced. The corporations involved are Emergency Doctors, Inc., at Butterworth Hospital, Grand Rapids; Emergency Physicians Service, Inc., at Blodgett Hospital, Grand Rapids; Emergency Doctors of Douglas, in the resort community of Saugatuck-Douglas; and Emergency Physicians of Muskegon, Inc. An official has explained that "if there is a suit and a finding against us, then we would just dissolve the corporation and continue some other way."

* * *

The Concerned Citizens Committee in Hastings has written the governor, legislators, other state officials – everyone – to try to get professional liability insurance for four young family physicians who have been planning to practice in Hastings this summer. Hastings, the county seat for Barry County, south of Grand Rapids, has a very poor ratio of one doctor to every 2,300 persons and the community has worked hard to get some new doctors. Last fall, the town thought it had the problem solved when four family-practice residents from the Lansing family practice training program agreed to join James R. Spindler, MD, when they complete their specialty training. Medical offices are being built now. The four young doctors, still undecided what to do, are ***Lawrence S. Hawkins, MD,*** *a graduate of the University of Chicago Medical School;* ***Michael***

(Continued on page 232)

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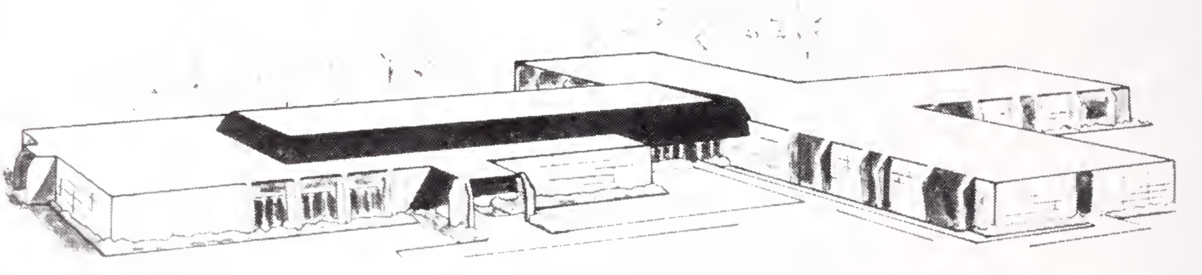

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*K. McAlvey, MD, of Petoskey, a graduate of the University of Michigan; **William W. Allen, MD,** of Columbia, Missouri, and a graduate of the University of Missouri; and **James Weatherhead, MD,** an Ohio native, who graduated from the Michigan State University Medical School.*

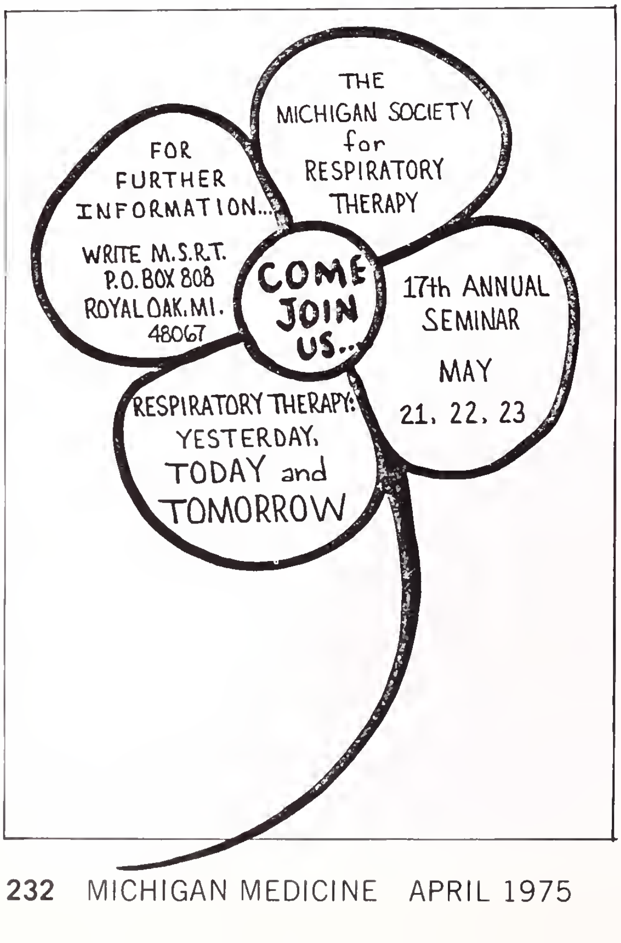
* * *

Carl Hansen, MD, the only medical doctor in the town of Stanton, Michigan, recently decided to give up all general surgery. Citing his high premiums for professional liability insurance, he said that he plans to retire in 1976. Doctor Hansen has served Stanton as a family doctor and surgeon for the past 35 years. Now in his sixties, he hoped to slow down his practice gradually but continue to offer his services to his more than 1,000 patients. He has no physician replacement at this time, nor does he know where to find one, since new doctors cannot obtain professional liability insurance in the state. When Doctor Hansen retires, Stanton will have only one osteopath to serve its medical needs.

* * *

***Richard Kranz, MD,** is a native Michigander interested in starting practice in Battle Creek this summer. The only company that will provide professional liability protection for him as a new doctor in Michigan is Lloyds of London. However, he would have to remain insured with the company for the rest of his life because once he leaves Lloyds the firm will not continue protection for possible lawsuits that might develop later and date back to the years he had coverage from Lloyds. His alternatives are to practice in another state or go into public health or the military until the current malpractice issue is resolved. "Then we'd have to woo him back to Battle Creek again," commented Doctor Bertram Zheutlin, whom Doctor Kranz planned to join in practice.*

"If I don't get insurance, I'm not sure what I will do," Doctor Kranz said. "I won't practice without it."



* * *

William C. VanGelder, MD, an orthopedic surgeon at Muskegon for the past 24 years, has closed his office and is moving to Birmingham, Alabama, where he will be in a group practice. In November, 1974, his annual premium with Lloyds of London jumped from $1,819 to $16,000. Instead of paying the much higher premium, he decided to go to Alabama. He reports that his previous insurance carriers, Hartford Insurance Company and Travelers Insurance Company, no longer handle professional liability insurance in Michigan. Doctor VanGelder has three pending suits, all filed by the same Muskegon attorney. Doctor VanGelder is considering suits against the parties involved after the cases are resolved. He terms them "nothing but nuisance claims."

* * *

Two Detroit surgeons formerly served with 28 other doctors to provide medical service for the emergency department at Mount Carmel Mercy Hospital, but they recently had to discontinue this kind of needed medical care to the people of Detroit. These two physicians recently decided to practice surgery with no professional liability insurance. They can do this but the emergency room corporation requires its physicians to carry insurance. The two surgeons, who have never been threatened with a lawsuit in their six years of practice, refused to pay a 1975 premium of $18,000 for the two. Their 1974 premium had been $5,400. Their names are being withheld because most physicians who carry no professional liability insurance prefer, for rather obvious reasons, to not publicize such a fact.

* * *

Three physicians in Cassopolis, the Cass County seat, have worked hard to convince **Neil See, MD,** to join them this June after he finishes his three-year family practice residency in Spokane, Washington. Doctor See, a native of Iowa who obtained his medical degree from the University of Iowa, cannot today get Michigan professional liability insurance from any of the major companies, and is undecided about where to practice. Doctors Aaron Warren, A. A. Aquino, and D. A. Speers are hopeful Doctor See will join them in Cassopolis this summer.

(Continued on page 236)

MATERNAL HEALTH DESK REFERENCE CARD NO. 18

(Sponsored and Prepared by the Committee on Maternal and Perinatal Health,
Michigan State Medical Society)

RUBELLA DIAGNOSIS

The dangers of Rubella infection during pregnancy are well recognized. Rubella is notorious for the variability of its clinical manifestations and the frequency of subclinical disease. Neither history nor physicial examination can establish the diagnosis without serologic confirmation. It has become increasingly accepted that prenatal patients should have blood drawn for a Rubella hemagglutination inhibition (HI) antibody titer at their first prenatal visit. The absence of any antibody activity in the lowest dilution of serum tested (reported as *less than* 1:8 or 1:10) indicates that the patient is susceptible to the disease. Conversely, the presence of antibodies, at any level, is evidence of prior infection and immunity to Rubella. Evidence of immunity can be demonstrated in 85 to 90 percent of patients. Six to 20 percent of patients are found to have an HI titer of 1:640, the highest reported level. Thus a high titer by itself does not necessarily indicate recent infection and is not a cause for concern.

The results of the HI test show a marked variation between different laboratories. Even in the same laboratory, a specimen tested on different occasions may show a difference in titer. Thus a reported change from 1:8 to 1:32 may not indicate a true rise in antibody level unless the samples are tested simultaneously. In order for this to be possible the original specimen *must* be frozen and stored in the laboratory.

The incubation period of Rubella is from 14 to 21 days. An initial viremia occurs which is followed by rash a few days later. The HI antibody titer then rises to reach its peak seven to 10 days after the rash. It may remain at this level for an extended period of time.

Any patient who is suspected of being exposed to Rubella may be reassured if an antibody titer of 1:8 or greater is reported before or within 10 days of first exposure. If no antibodies can be demonstrated the patient is susceptible. The test should then be repeated with a second sample drawn four weeks later even if no clinical disease is noted. If a second serum, obtained 30 days after *latest* possible exposure, remains negative this indicates that no infection occurred and the patient can be reassured. However if the second specimen reveals the presence of antibodies the patient must be assumed to have had the disease. Prophylactic 8-globulin does not reduce the fetal risks of rubella infection.

A patient first seen soon after possible infection should have a serum specimen drawn at once. If this first specimen reveals susceptibility she should be followed as described above. When a level of antibodies is present 10 days or more after the latest possible exposure, prior infection must be assumed. In order to establish that this was recent infection, serial samples must be obtained. Rising antibody titers demonstrated by the HI test, by indirect fluorescent antibody methods or by the complement fixation method confirm recent infection. Similarly the presence of IgM antibodies to rubella indicate infection within the previous 21 days.

Expert assistance is available for directing and interpreting results of virologic tests through Kenneth Wilcox, MD, Chief, Bureau of Laboratories, Michigan State Health Department, (Office: (517) 373-1381, Laboratory (517) 373-1426) or Joseph Baublis, MD, Department of Pediatrics and Communicable Disease, University of Michigan, (313) 763-2439.

It is advisable that patients who are susceptible to Rubella be given Rubella vaccine after delivery with strict instructions to avoid pregnancy for at least three months.

Prepared for the Committee on Maternal and Perinatal Health, Michigan State Medical Society by Jan Schneider, MD, Ann Arbor and Joseph Baublis, MD, Ann Arbor.

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The Ingham County Medical Care Facility cannot obtain a new medical director because insurance companies are refusing to write professional liability coverage for any new Michigan doctor. County Social Services Board Chairman Judson Werbelow says, "We cannot get anyone to talk about the premium, or even consider it." This is all despite a present policy that the county has for all employees in the county health facility. And this is also despite the fact that the medical director would do no surgery or anesthesia – all patients are referred to local hospitals for surgery. The present director, who is considering retirement because of age and poor health, is making his rounds in a wheelchair because of an ankle injury.

* * *

Ronald Holmes, MD, plans to return to his hometown of Plymouth in June when he completes his residency in pediatrics at the University of Michigan Medical Center. Doctor Holmes, who plans to go into solo practice, is a graduate of the Wayne State University Medical School. As of today, none of the major professional liability insurance companies will write a new policy for Doctor Holmes or any new physician wanting to practice in Michigan.

* * *

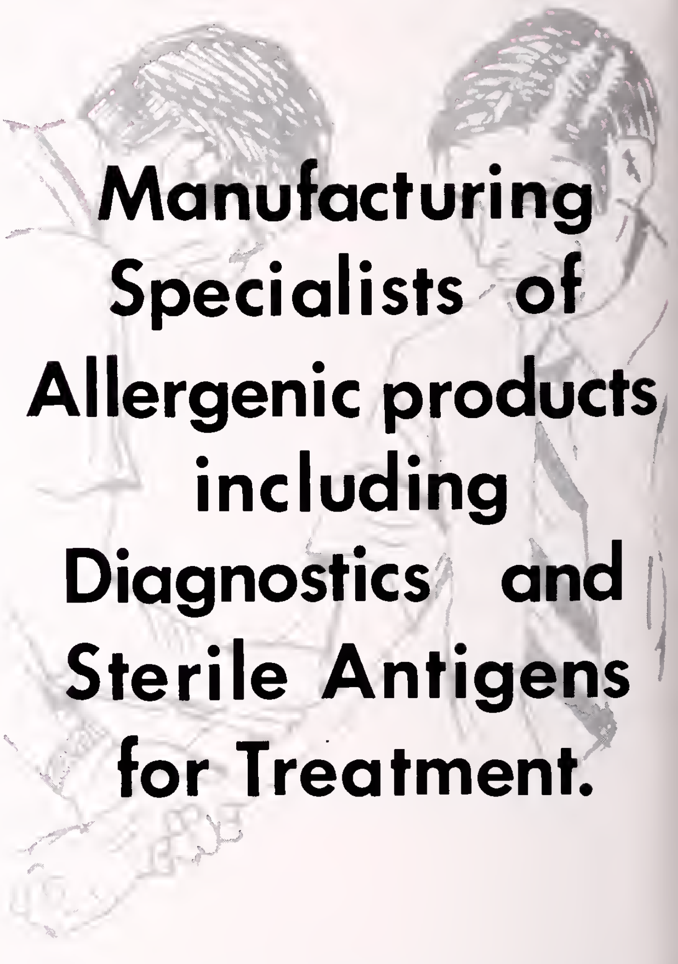
When two Manistee physicians let their policy expire, they found that the insurer later would not renew the policy. Both are now providing medical service but are not sure how long they will continue to practice without professional liability coverage. Neither has had any litigations in the past. Another Manistee physician who is an obstetrician-gynecologist says he will not pay a forthcoming annual premium of $13,000, because this northern Michigan community cannot support such a fee.

* * *

Members of the Kalamazoo Anesthesiology Professional Corporation say they will have no alternative in July but to "close up shop" because their present professional liability coverage will expire then. **Patrick Littlejohn, MD,** a member of the group, reports that some of the anesthesiologists already are looking for jobs elsewhere. One of the major professional liability insurance firms is cancelling the policies it had been writing for Michigan anesthesiologists. Insurance firms classify all physicians in five categories for underwriting purposes and anesthesiologists are in Class 5, the highest-risk group.

* * *

*Two graduates of the Indiana University Medical School will go into practice this summer at Iron Mountain – if they can obtain professional liability insurance. **James Batti, MD,** and **David Barnes, MD,** are now completing their family practice residency in South Bend.*



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In Memoriam

Robert C. Bennett, MD
Detroit

The personal physician to boxers Joe Louis, Sugar Ray Robinson, Ike Williams and Sonny Liston, Robert C. Bennett, MD, Detroit, died Feb. 7 at the age of 64. Doctor Bennett was Golden Gloves Association consultant and US Amateur Boxing Team physician. He was a graduate of Meharry College medical school.

Aloysius S. Church, MD
Detroit

Aloysius S. Church, MD, Detroit Recorder's Court psychiatrist until his retirement in 1970, died Feb. 25 at the age of 66. Doctor Church had been administrative psychiatrist with the Detroit Public Schools, medical director of St. Joseph's Retreat in Dearborn and consultant to the Catholic Family Center in Detroit. He was a graduate of Wayne State University.

Howard B. Hoffman, MD
Ludington

Long-time Ludington physician Howard Bostwick Hoffman, MD, died Feb. 2 at the age of 75. Doctor Hoffman was a graduate of the University of Michigan Medical School and holder of the 1922 National AAU javelin throwing championship.

Elmer E. Texter, MD
Grosse Pointe Park

The second president of the American Academy of Family Physicians, Elmer E. Texter, MD, Grosse Pointe Park, died Feb. 6 at the age of 81. He was a graduate of Wayne State University School of Medicine and was affiliated with Detroit Memorial Hospital. He also was past president of the Michigan Academy of Family Physicians and a founding member of the World Medical Association.

Jacob Weinstein, MD
Oak Park

Jacob Weinstein, MD, north Detroit-area physician for 25 years, died Feb. 27 at the age of 70. He was a graduate of Wayne State University School of Medicine and was affiliated with North Detroit General, Trumbull General and Grace Hospitals.

Arthur R. Young, MD
Bloomfield Hills

Past president of the Oakland County Medical Society, former chief of staff at Pontiac General Hospital and first director of Oakland University's health unit, Arthur R. Young, MD, Bloomfield Hills, died March 1 at the age of 78. He was a graduate of Rush Medical College.

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Letters

SIDS Still A 'Disease of Theories'

By J. H. Ahronheim, MD
Jackson

The Sudden Infant Death Syndrome (SIDS) has for many years been of great concern not only to the medical profession but to the general public as well, and it is for that reason that Doctor Kadlub's recent article on this issue (*Mich. Med.* Nov. 1974) has resulted in quite a stir, particularly in the lay press.

In his article, Dr. Kadlub proposes that the form of death frequently, and unfortunately, referred to as "crib death," is caused by an air bubble trapped in the infant's respiratory tract, a theory which immediately was published in newspapers all over the country and even abroad. The reaction among mothers, who had lost children from SIDS, seemed to have generally been one of agreement, in the belief that the theory was consistent with the observation gained from their own children's deaths.

Whatever our own reaction to Doctor Kadlub's article may be, it is obvious that he has just added another interpretation to the many proposed over the years, all of which caused initial interest until another, seemingly more convincing, theory was put forth.

If we wish to evaluate the various ideas on this subject, we must agree on what exactly SIDS is and what it is not. Obviously, it is not the case in which the infant dies from a well established disease, conclusively diagnosed clinically and/or pathologically.

To be classified as one of SIDS certain criteria must be met. The typical case is that of an infant between the ages of two and six months, dying in the vast majority of the cases between late October and early April. There is no relationship to the family's socio-economic status. It is irrelevant whether the infant is well nourished or emaciated, neglected or well taken care of. Often the history of a slight cold preceding the death by a day or two is supplied by the family.

At autopsy, the findings, in the majority of the cases, are confined to those seen in acute respiratory distress, as pulmonary emphysema, mediastinal petachiae of Tardieu type and generalized cyanosis. Bacteriologic and viral studies are invariably negative or inconclusive. Not infrequently, an acute otitis media is found. There are sporadic reports in the medical literature on a number of other pathologic findings, such as laryngeal edema, fibrinoid necrosis of the larynx, myocarditis, low gamma globulin levels and others, but they are few and far between and may even represent entirely different disease entities.

Interpretations of this dramatic type of death have been attempted for many years. As early as 1615 Plater coined the term "mors thymica," thymic death, which had been in vogue until about 30 years ago. The belief that the infant smothered accidentally in the pillows of the crib was, and still is, quite popular, particularly among laymen. In more recent years, hypersensitivity to mother's milk was blamed for the infant's death. The theory, which is probably preferred by the majority of the pathologists, is that of an overwhelming infection in an individual that has not yet gained the capacity of throwing off a simple cold which would do little harm to older individuals.

In analyzing the various interpretations, we find that all but the infectious theory fail to meet all the criteria expected in a typical case of SIDS. They do not take into account the seasonal distribution, the relatively frequent occurrence of otitis media (one of every three cases in my own autopsy material), nor the frequent history of a preceded respiratory infection. While the proponents of the infectious theory stress these factors as most significant, the opponents point their fingers at the consistently inconclusive bacteriologic and viral tests.

Infant death from mechanical means probably does occur, and a true "crib death," meaning one occurring from entanglement in pillows or blankets, is certainly conceivable. The evidence is such, however, as to assume that death from mechanical means can only rarely be classified as SIDS.

I must agree with a statement made by R. A. Hoekelman (*Mich. Med.*, Feb. 1975), in which he objects to Dr. Kadlub's poorly documented and scientifically unsupported theory, and I predict that, in spite of some initial favorable reaction, it too will go the way of all the other ideas on SIDS.

At the present time, we must admit that Sudden Infant Death is still a "Disease of Theories," as it was termed by Collins in 1961. The extensive studies on this disease entity which have been, and still are being, conducted, the financial support by the State of Michigan authorized recently, and the fine activities of the National Foundation of Sudden Infant Death, are fully justified. We can only hope that some day the mystery will be solved pointing the way to effective prevention.

Doctor Ahronheim is a pathologist.

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

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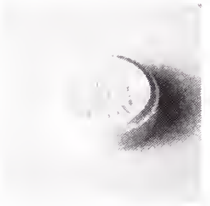
Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.



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President's Page

Eternal Vigilance Key to Future

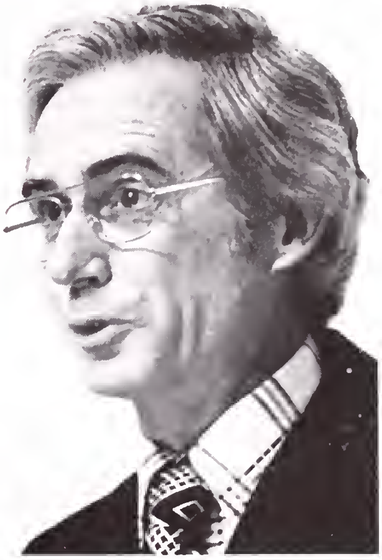
(The following is excerpted from Doctor Masters' exaugural address before the May 4-6 MSMS House of Delegates Annual Session in Southfield.)

My inaugural remarks stressed that organized medicine must address itself to many facets of the health care scene. These included: The maldistribution of physicians, the need for more primary physicians, the medical schools, postgraduate or continuing medical education, paramedical personnel, delineation of quality of medical care, cost of that medical care, national health insurance, PSRO, Blue Shield and all third-party payers.

These problems continue to demand our attention. Their resolution is the long-term goal for which we must continue to strive. My hope for the future is that crises, such as Medicaid, PSRO, malpractice, will not impede progress toward these over-all objectives. Their attainment must be achieved in time to preserve the high quality of medical care which is possible only when our profession can function in an atmosphere of freedom and excellence.

These objectives can be achieved with top quality leadership and unity within the profession. I am very conscious of the fact that I have stressed two recurring themes during my term in office: (1) The need of our profession to develop our very best leaders; leaders with ideas and dreams and the courage to promote these ideals with vigor; (2) The absolute necessity for unity within our profession — NOW! Never has the freedom to practice quality medical care been under such threat. If we are not to succumb to bureaucratic strangulation, we must unite, both geographically and all the specialties.

I feel I should list my conclusions regarding the professional liability crisis with which we have been wrestling for the past 18 months. This is a serious problem and it does threaten the very rubric of health care delivery. More than that, it is a threat to the morale of our profession. Being a complex professional and societal issue, this problem is not amenable to simplistic solutions. However, a solution will be found! It is being forged now in the legislature and before the public. But, you should remember that problems also prevent opportunities.



Doctor Masters

Out of the professional liability crisis, we have a chance to accomplish two reasonable long-range goals:

1. With the public support which we now have, we can demand far-reaching legislation which will truly define malpractice and will place this threat in proper perspective, and
2. We can strengthen our own house with proper peer review and the commitment to quality care which will permit responsive attention to patient needs, and will maintain the public confidence which the medical profession has always enjoyed.

Without question, my election as MSMS president will be the highest professional honor I shall ever achieve. I am truly grateful.

Now it is time to look ahead. I look forward to the administration of Brock Brush and the other new officers. I am sure that the future of the MSMS is in good hands and that it will continue to grow, if only every doctor in Michigan will maintain that most essential ingredient of freedom: Eternal vigilance!

Brooker L. Masters, MD

The deep interest of the Michigan medical profession in the malpractice insurance crisis was evident in the nearly 200 persons who attended the special March 12 briefing presented by MSMS at Lansing.

A multi-media introduction to the problem opened the briefing, which included descriptions of MSMS efforts to develop a doctor-owned insurance program and status reports on MSMS bills to ease the insurance crisis.

Key persons in the briefing session were, from left, Robert M. Leitch, MD, then chairman, MSMS Council; John J. Coury, MD, MSMS past president and chairman, MSMS Select Committee on Professional Liability; and Brooker L. Masters, MD, then MSMS president.

The Event: MSMS Briefing Session The Subject: Malpractice

On the panel which fielded questions at the close of the program were, from left, Doctor Coury; Kenneth Ray, MD, Leland C. Holly II, MD, MSMS councilor; Thomas Berglund, MD, chairman, MSMS Committee on State Legislation and Regulations; Frank B. Walker, II, MD, chairman, MSMS Task Force to Consider Self-Insured Professional Liability Insurance Program, and Robert E. Rice, MD, chairman, MSMS Committee on Federal Legislation.

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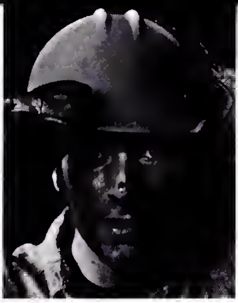
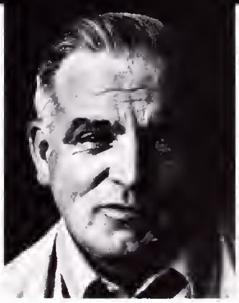


The patient with gastritis

The patient on uricosurics



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MEETINGS

May 16-17 – Syposium, "Soft Tissue Sarcomas," sponsored by American Cancer Society and Wayne State University, at Webber Auditorium, Harper Hospital, contact: Ralph Pickett, American Cancer Society, 1205 E. Saginaw, Lansing, 48906.

May 21 – 107th Annual Reunion, WSU School of Medicine Alumni Association, at Sheraton-Southfield (formerly Shiawassee Hotel), Southfield, contact: Alumni House, Wayne State University, Detroit, 48202.

May 21-23 — Ninth Annual Medical Staff-Trustee-Administrator Forum, Boyne Mountain Lodge, sponsored by Michigan Hospital Association, contact: Patric E. Ludwig, President, MHA, 2213 E. Grand River Ave., Lansing, 48912.

May 21-23 — 17th Annual Seminar, Michigan Society of Respiratory Therapy, contact: MSRT, PO Box 808, Royal Oak, 48067.

May 21-23 – Michigan Public Health Association annual meeting, Pantlind Hotel, Grand Rapids, contact: Barbara Clark, program chairman, 1800 Kales Bldg., 76 W. Adams, Detroit, 48204.

May 28 – Seminar on Medicine and Law (Malpractice), Institute for Continuing Legal Education, U-M Medical Center, Ann Arbor.*

May 30-31 – 14th Annual Kidney Disease Symposium of Kidney Foundation of Michigan, at Gezon Auditorium, Calvin College, Grand Rapids, contact: John C. Peirce, MD, Chairman, KFM, 3378 Washington Ave., Ann Arbor, 48104.

June 2-July 18 — MSMS Comprehensive Review Program for FMGs, at Oakland University, contact: Health Science Programs, Oakland University, Rochester, 48063.

June 3-5 – Annual Meeting, Michigan chapter, American Academy of Pediatrics, Bay Valley Inn, contact: Charles Coffman, executive secretary, 4791 Haddington Drive, Bloomfield Hills, 48013.

June 3-6 – Postgraduate course in advances in internal medicine, U-M Medical Center, Ann Arbor.*

June 3-7 – One-week tutorial session in clinical cardiology, Henry Ford Hospital, limited enrollment, contact: Sidney Goldstein, MD, head, Division of Cardiovascular Disease, Henry Ford Hospital, Detroit, 48202.

June 11 – The Council, MSMS headquarters, contact: Warren F. Tryloff, director.

June 11-12 – PAS and MAP tutorial session, including PSRO legislation, at headquarters, Commission on Professional and Hospital Activities, contact: CPHA, 1968 Green Road, Ann Arbor, 48105.

June 15-19 – AMA Annual Convention, Atlantic City.

June 16-20 – Educational course, "Advanced Techniques for the Health Record Analyst," at headquarters, Commission on Professional and Hospital Activities, contact: CPHA, 1968 Green Road, Ann Arbor 48105.

June 20-21 — Upper Peninsula Medical Society, Holiday Inn, Marinette, Wis., contact: Harold P. Brukardt, MD, chairman, 534 First St., Menominee, 49858.

June 20-21 – Annual Keyport Trauma Day, Otsego Ski Club, Gaylord, contact: Benjamin E. Henig, MD, 604 Peninsular, Grayling, 49738.

June 23-29 – Northern Michigan summer postgraduate education course for physicians, sponsored by U-M Medical Center, at Shanty Creek Lodge, Bellaire.*

June 27-29 – Annual Meeting and Symposium on Pediatric Dermatology, Michigan Dermatological Society, Bay Valley Inn, Bay City, contact: James D. Stroud, MD, 1590 W. Nine Mile Road, Southfield.

July 24-25 – Annual Coller, Penberthy, Thirlby Conference, Park Place Motor Inn, Traverse City, contact: Laurence P. Skendzel, MD, Munson Medical Center, Traverse City, 49684.

July 26-27 – AMA Regional Continuing Medical Education Courses, Minneapolis, contact: CME Circulation and Records Dept., AMA, 535 N. Dearborn, Chicago 60610.

Aug. 2 – The Council, Bay Valley Inn, Bay City, contact: Warren F. Tryloff, director.

Aug. 9-13 – Annual meeting and scientific assembly, Michigan Academy of Family Physicians, Park Place Motor Inn, Traverse City, contact: Rita Feldkamp, executive secretary, 933 Wing St., Plymouth 48170.

Sept. 13 – September Seminar, "Pathology of the Breast," Michigan Society of Pathologists, St. John's Hospital, Detroit, contact: Robert Hendrix, Department of Pathology, University of Michigan, Ann Arbor 48104.

Sept. 24 – The Council, MSMS headquarters, contact: Warren F. Tryloff, director.

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*Contact K. Richards, Towsley Center, University of Michigan, Ann Arbor 48104.

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PATTERN OF ELECTROTHERAPY IN MICHIGAN

By H. C. Tien, MD
Lansing

Introduction

The Massachusetts Guideline, published in March, 1973 as *A Task Force Report on Electroconvulsive Therapy in Massachusetts* (1) is making its effect felt not only in the original state, but also on the pattern of electrotherapy as practiced in Michigan and eventually in other states as well.[2,3]

The members of Massachusetts Task Force were well aware of the severe conflict that existed between users and non-users of electrotherapy. The authors of Massachusetts Guideline further stated that "As the mainstay (until the era of psychotropic drugs) of those who sought a biological approach to the treatment of psychiatric illnesses, ECT became the emblem maligned by some and hallowed by others. An ever-widening gulf then attenuated any meaningful dialogue between the divergent groups. What emerges clearly is that ECT is neither the villain of the piece nor its all-conquering hero." The Massachusetts Task Force stated the objective of their article was that "the members of the Task Force wish it to be understood that they do not intend to suggest requirements, but are eager to develop flexible guidelines. It is not intended that all who administer ECT should fear to deviate from this prescription." In spite of its cautious language, the Massachusetts Guideline has unwittingly become a legal instrument of conflict and professional bone of contention in Michigan.

In order to contain and control electrotherapy, a Michigan Community Mental Health Center, built and financed by federal funds, had hastily passed on May, 1, 1973, the so-called "Massachusetts Guideline" *in toto* as rigid hospital regulations with restrictive interpretations in the form of *Policies and Procedures Concerning Electroconvulsive Therapy* of Michigan Community Mental Health Center (See Appendix). This immediately led to a legal conflict in Federal District Court, Grand Rapids, Michigan.

The author regards the summary interpretation of the Massachusetts Guideline as unduly restrictive on the following points:

1) The biased effect on psychiatrists who use electrotherapy versus those who do not;
2) The discriminatory requirement of rigid therapeutic rules upon electrotherapists, but not on chemotherapists and psychotherapists;
3) The arbitrary constriction of finer clinical judgment of practicing psychiatrists in the determination of the appropriate treatment for each patient;
4) The exclusion of patients with paranoid schizophrenia from the benefits of electrotherapy;
5) The exclusion of patients with depression of psychoneurotic type from the benefits of electrotherapy;
6) The exclusion of patients with depressive or suicidal personality disorders from the benefits of electrotherapy;
7) The compulsory use of intravenous anesthesia in every patient; and
8) The requirement of a committee of three psychiatrists to approve each and every case of electrotherapy, *before* treatment.

In order to determine the professional opinions of other Michigan psychiatrists and to ascertain the therapeutic validity of the Massachusetts Guideline as published[1] or as restrictively interpreted by this single Michigan Community Mental Health Center (See Appendix), the author decided to find out the actual pattern of practice of electrotherapy in Michigan as a whole. The present study is based on 540 questionnaires sent out to all members of the Michigan Society of Psychiatry.

Method

The following questionnaire, in the form of a letter, was sent out to 540 members of Michigan Society of Psychiatry:

Dear Colleague:

I am seeking your opinion and advice.

The reason is this: Recently, a guideline was passed by our Michigan Community Mental Health Center. (Enclosed please find a copy of the "Policies and Procedures Concerning Electroconvulsive Therapy.")

I would appreciate it if you would kindly take a few minutes to go over this guideline and let me have

---

The author is with the Michigan Institute of Psychosynthesis, Lansing.

TABLE 1

Study	N	Number Respondents	Percentage Respondents
Massachusetts	650	66	10%
Michigan	540	92	17%

TABLE 2
JOB STATUS OF RESPONDENTS

Description	N	Percentage
Chairman, Department of Psychiatry	2	2%
Superintendent, State Hospital	2	2%
Director, State Hospital	7	8%
Director, Community Mental Health Center	3	3%
Director, Psychiatric Hospital	3	3%
Director, Private Clinic	4	5%
Chief, Psychiatric Services	3	3%
Staff Psychiatrist, university, etc.	11	12%
Private Psychiatrist	49	53%
Unknown	8	9%
TOTAL	92	100%

your professional opinion regarding electrotherapy.

1. *Do you, at present, use any type of electrotherapy in your practice?*
2. *Do you have such a guideline at your hospital, clinic, or center?*
3. *Do you think our guideline is too restrictive, not restrictive enough, or about consistent with your own experience and practice?*
4. *Besides catatonic or schizo-affective type, do you treat other types of schizophrenia with electrotherapy (e.g., paranoid schizophrenia)?*
5. *Do you treat depression of psychoneurotic type with electrotherapy?*
6. *Do you treat depressive or suicidal personality disorders with electrotherapy?*
7. *Do you always use intravenous anesthesia, such as a barbiturate and succinyl choline (anectine) for all your electrotherapy?*
8. *Finally, do you have any other comments on electrotherapy in general and our guidelines in particular?*

The data obtained from the questionnaire were tabulated and analyzed according to the following scheme:

A. Percentage of Responses of Massachusetts and Michigan Studies Compared.

B. Percentage Analysis of Job Status of Respondents.

C. Percentage of Board-Certification of Respondents as Compared to Michigan Society of Psychiatry.

D. Simple Percentage Tabulations of the First 7 Questions, Q-1 to Q-7.

E. Separation and X^2 Analysis of Respondents According to Electrotherapists (answered "yes" to Q-1) Versus Non-Electrotherapists (answered "no" to Q-1) on Board Certification.

F. Percentage Analysis and X^2 Significance Tests of Electrotherapists Versus Non-Electrotherapists on All Items, Q-2 to Q-7.

G. Descriptive Sample Statements of Respondents on Q-8.

In order to obtain "consensual validation" a similar questionnaire was also sent to all the 11 members of the original Massachusetts Task Force (Fred Frankel, M.D., Chairman; Drs. Robert Arnot, Donald Bowen, Gerald Caplan, Jonathan Cole, Donald Gair, David Landau, Philip Quinn, Gershen Rosenblum [Ph.D.], Carl Salzman, and Daniel Weiss) who framed the Massachusetts Guideline, so as to obtain their reaction on the correctness of interpretation of their Guideline by our Michigan Community Mental Health Center (See Appendix).

Results

Ninety-eight out of 540 questionnaires were returned. Six are excluded from statistical analysis because two respondents refused to comment, two had retired, one was a neurosurgeon, and the sixth one was answered by a psychiatrist's widow. The remaining 92 questionnaires represent 17% of the 540 questionnaires sent, which compares favorably with the Massachusetts Task Force Report based on 66 respondents, or 10% of 650 questionnaires sent. *(Table 1.)*

The job status of the 92 respondents ranged from the chairmen of departments of psychiatry, superintendents of state hospitals, directors of mental health clinics and private hospitals, chief psychiatrists of services, staff psychiatrists, and private psychiatrists. The majority of the respondents were private psychiatrists (53%). *(Table 2.)*

In order to further ascertain the professional competence of the respondents, percentage comparison of board-certification of the repsondents was also made. The Michigan Society membership has approximately 49% of its members board-certified, and our respondents showed 52%. However, eight of the respondents' board-certifications were not certain, so they were proportionally assigned in the statistical analysis. This did not change the percentage results. *(Table 3)*

Having determined that the professional competency as judged by board-certification between the respondents and the members of Michigan Society of Psychiatry was basically the same, a simple percentage analysis of the responses to the eight-item (Q-1 to Q-8) questionnaire was tabulated. To Q-1, "Do you at present use any type of electrotherapy in your practice?", almost half of the respondent psychiatrists answered *Yes* (45%). *Q-2:* The majority claimed they already have a guideline (55%). *Q-3:* 14% answered *Yes*, meaning the Massachusetts Guideline was overly restrictive in interpretation by our Michigan Community Mental Health Center; 15% answered *No*, meaning that the Massachusetts Guideline was not restrictive enough, as interpreted. However, the great majority (71%) reported the guideline as interpreted to be consistent with their experience and practice. However, the respondents voiced some basic disagreements, which shall be described in responses to Q-8.

Q-4: One-third of the respondent psychiatrists (36%) would use electrotherapy in the treatment of paranoid schizophrenia. *Q-5:* Almost one-half of the psychiatrists (44%) would use electrotherapy in neurotic depression. *Q-6:* More than one-half (52%) would use it in personality disorders with suicidal depression. *Q-7:* The great majority (83%) claimed they always use intravenous anesthesia. And since *Q-8* is not quantifiable, we shall reserve the comments for discussion later in the paper. (*Table 4.*)

On *prima facie* evidence, the majority of the respondents seem to accept the Massachusetts Guideline as a good document, but not without divergent views and significant disagreements on the use of electrotherapy in the treatment of paranoid schizophrenia, psychoneurotic depression, and suicidal personality disorders. And some respondents (N = 14) had serious reservations, especially on using a committee of review of three psychiatrists to monitor each and every case of electrotherapy, *before* treatment.

The author noticed the electrotherapists (i.e., respondents who answered "yes" to Q-1) and non-electrotherapists (i.e., respondents who answered "no" to Q-1) handled the questions Q-2 to Q-8 differently. The author, therefore, further separated the data into two groups, i.e., the electrotherapists vs. non-electrotherapists, in order to ascertain whether there is a statistically significant difference between those who are practicing electrotherapy and those who do not; and also to determine whether the electrotherapists would interpret the Massachusetts Guildeline differently from our Michigan group. First of all, to establish again the professional competence of each group of respondents, the null-hypothesis was made that there is no difference in board-certification between electrotherapists and non-electrotherapists, and the results showed there is no significance ($x^2 = 0.177$, $P < 0.70$). (*Table 5.*)

Having established that there is no difference in professional competence, based on board-certification, between the electrotherapists and non-electrotherapists, percentage analysis and x^2 significance tests were performed. The results reveal that on Q-2, the availability of guidelines, there is no significance between the two groups ($P < 0.10$). On Q-3, the question of over-restrictiveness in interpreting Massachusetts Guideline by our Michigan groups, 24% of the electrotherapists responded *Yes*, meaning too restrictive; 19% answered *No*, meaning not restrictive enough; whereas *none* (0%) of the non-electrotherapists felt the Massachusetts Guideline was overly restrictive as interpreted by our Michigan group in question, and, in fact, 21% termed the Massachusetts Guideline not restrictive enough. In other words, there is a significant difference between the two groups ($P < 0.05$). (*Table 6.*)

On Q-4, in the use of electrotherapy in paranoid schizophrenia, 49% of the electrotherapists would recommend it, as opposed to 25% of non-electrotherapists. Again, this is significant ($P < 0.05$). On Q-5, in the use of electrotherapy in psychoneurotic depression, 61% of electrotherapists would recommend it, whereas only 15% of the non-electrotherapists would. This is highly significant. ($P < 0.001$). On Q-6, in the use of electrotherapy in depressive personality disorders, 69% of electrotherapists would recommend it, whereas only 30% of the non-electrotherapists would. This is significant ($P<0.01$). On Q-7, in regard to the consistent use of intravenous anesthesia, the response is interesting, because there is more agreement amongst electrotherapists (91%), who actually use intravenous anesthesia, than the non-electrotherapists (68%) who would recommend its use. However, this is significant ($P < 0.05$).

Comments of Respondents

The comments from the respondent psychiatrists to Q-8 seem to reflect the statistics of the data collected.

Professor of psychiatry: "I tend to be more restrictive about the use of ECT with schizophrenic patients than your policies and procedures suggest. On the other hand, if a severe neurotic depression is not responding to psychotherapy or drugs, and especially if the patient is suicidal, we will sometimes treat him/her with electrotherapy."

Private psychiatrist: "I feel that your guideline is about consistent with my own experience in practice, with a few exceptions. You should include paranoid schizophrenia as a separate classification and I object to the exclusion of depressive reactions (neurotic)."

A Canadian member of Michigan Society of Psychiatry: "Indications for electrotherapy are not for specific diagnostic categories, but rather symptoms of depression. Therefore, our colleagues found it indicated in about 1/5 of our patients, whatever their diagnostic category."

Director of a state hospital: "As you are probably aware, the use of electrotherapy in our hospital has been reduced to a bare minimum. This has not occurred out of design, but rather out of lack of necessity. I believe it was less than 5/10 of 1% last year."

Director of another state hospital: "At the present time, we are not giving any electrotherapy in this hospital. Not that we do not feel the need or the desirability of it, but it is because of the malpractice insurance rates."

TABLE 3: BOARD-CERTIFICATION OF RESPONDENTS

Psychiatrists	N	Board Certification	Non-Certification
Michigan Society	540	262 = 49%	278 = 51%
Respondents	92	48 = 52%	44 = 48%

TABLE 4: SIMPLE PERCENTAGE ANALYSIS OF RESPONSES

Items	Responses	Yes	No	Interpretation
Q-1.	Do you, at present, use any type of electrotherapy in your practice?	$\frac{41}{92} = 45\%$	$\frac{51}{92} = 55\%$	About half of the psychiatrists use electrotherapy.
Q-2.	Do you have such a guideline at your hospital, clinic, or center?	$\frac{43}{78} = 55\%$	$\frac{35}{78} = 45\%$	Majority has guideline.
Q-3.	Do you think our guideline is too restrictive *(yes)*, not restrictive enough *(no)*, or about consistent w/ your own experience and practice?	$\frac{11}{78} = 14\%$	$\frac{12}{78} = 15\%$	$\frac{55}{78} = 71\%$ (consistent)
Q-4.	Besides catatonic or schizo-affective type, do you treat other types of schizophrenia with electrotherapy (e.g., paranoid schizophrenia)?	$\frac{25}{69} = 36\%$	$\frac{44}{69} = 64\%$	One-third would use electrotherapy in paranoid schizophrenia.
Q-5.	Do you treat depression of psychoneurotic type with electrotherapy?	$\frac{31}{71} = 44\%$	$\frac{40}{71} = 56\%$	Almost ½ would use it in neurotic depression.
Q-6.	Do you treat depressive or suicidal personality disorders with electrotherapy?	$\frac{36}{69} = 52\%$	$\frac{33}{69} = 48\%$	More than ½ use it in personality disorders.
Q-7.	Do you *always* use intravenous anesthesia, such as a barbiturate and succinyl choline (anectine) for all your electrotherapy?	$\frac{54}{65} = 83\%$	$\frac{11}{65} = 17\%$	Great majority would always use intravenous anesthesia.
Q-8.	Do you have any other comments on electrotherapy in general and our guidelines in particular?	Not quantifiable. Discussed in text.		

TABLE 5: BOARD-CERTIFICATION OF ELECTROTHERAPISTS VS. NON-ELECTROTHERAPISTS

Psychiatrists	Board Certification	Non-Certification	Total
Electrotherapist Group	22/21	19/20	41
Non-Electrotherapist Group	26/27	25/24	51
TOTALS	48	44	92

$x^2 = 0.177$, $P < 0.70$, not significant

A retired senior psychiatrist: "I think your guideline is too restrictive. I am glad I am retired. A guideline like this gives dozens of words and phrases to be used by the plaintiff's attorney to prove the defendant psychiatrist or the defendant committee of three psychiatrists was negligent in not adhering to the written standard of practice."

Even though the above quotations in answer to Q-8 are not subject to statistical analysis, they reflect the position of the original members of Massachusetts Task Force. Four of the original members of the Massachusetts Task Force replied. Dr. Arnot wrote, "There is a serious error in the report as it has been circulated in The Massachusetts Journal of Mental Health.[1] In response to your question, 'Is depression of psychoneurotic type completely excluded from the Massachusetts guideline?', this is where the error exists. We had many, many discussions on this subject at the time that the Task Force was meeting. Those of us who use electric shock know that one-half or more of our depressions are properly diagnosed psychoneurotic depression, and that the diagnosis manic-depressive depressed should not be used simply

Table 6: Percentage Analysis and x^2 Significance of Electrotherapists vs. Non-Electrotherapists

Q-1: Do you at present use any type of electrotherapy?

		YES Electrotherapists	NO Non-Electrotherapists	x^2
Q-2: Availability of guideline	YES	28/44 = 64%	13/33 = 39%	$p < 0.10$ not significant
	NO	16/44 = 36%	20/33 = 61%	
Q-3: Over-restrictiveness in interpreting Massachusetts Guideline	YES	10/41 = 24%	0/33 = 0%	$p < 0.05$ significant
	NO	4/41 = 10%	7/33 = 21%	
	"C"	27/41 = 66%	26/33 = 79%	
Q-4: Use of electrotherapy in schizophrenia	YES	20/41 = 49%	7/28 = 25%	$p < 0.05$ significant
	NO	21/41 = 51%	21/28 = 75%	
Q-5: Use of electrotherapy in psychoneurotic depression	YES	27/44 = 61%	4/27 = 15%	$p < 0.001$ significant
	NO	17/44 = 39%	23/27 = 85%	
Q-6: Use of electrotherapy in personality disorder	YES	29/42 = 69%	8/27 = 30%	$p < 0.01$ significant
	NO	13/42 = 31%	19/27 = 70%	
Q-7: Consistent use of intravenous anesthesia	YES	40/44 = 91%	15/22 = 68%	$p < 0.05$ significant
	NO	4/44 = 9%	7/22 = 32%	

to make the case acceptable for electric shock therapy."

Dr. Philip Quinn replied, "I feel your ECT policies are quite accurate, but perhaps a little too restrictive. Neurotic depressive reactions are not excluded from the Massachusetts Guideline." Dr. Donald Bowen said, "In my professional opinion, I believe your interpretation is too restrictive. We have not recommended that every case be reviewed by a committee before ECT is utilized." And finally, Dr. Fred H. Frankel, the chairman, affirmed, "The Task Force members did not intend to suggest rigid requirements, but were eager to develop flexible guidelines for the administration of ECT . . . The report expresses the concerns of the members regarding psychoneurotic and reactive depression, and pathological personality problems: these statements were not intended to exclude ECT completely from such condition."

Discussion

The author chose the term *electrotherapy* (ELT) in the title and whenever possible to reduce the emotionalism of electroshock therapy (EST) or electroconvulsive therapy (ECT).

The Massachusetts Guideline is helping to break down the myth and horrors of electroshock therapy of the past. It has re-confirmed electrotherapy as a therapeutic force, complementary to chemotherapy and psychotherapy. And as such, electrotherapy should be studied objectively (e.g., as in process schizophrenia, by Murillo and Exner[4]).

The prevalent use of intravenous anesthesia in electrotherapy further reflects the emotional problem of witnessing its dramatic orgasmic effects, rather than the expressed need of 'anesthesia,' since it already contains its own built-in electroanesthesia.[5]

This Michigan study shows that electrotherapy is widely used in the treatment of psychoneurotic depressions and depressive personality disorders, besides affective psychoses and schizophrenias. The mere fact a person (for example, Senator Eagleton) has received electrotherapy does not mean he was ever psychotic or schizophrenic.

It is high time for psychiatrists to acknowledge openly that electrotherapy is used in the treatment of depressions of psychosis, neurosis *or* personality disorders in the modern practice of eclectic psychiatry.

Recommendation

The author, therefore, would recommend that a Task Force similar to Massachusetts on electrotherapy be convened in Michigan, to develop flexible guidelines for the administration of electrotherapy in Michigan, and similarly, in other states.

References

1. Frankel, F., et al: "Electro-Convulsive Therapy in Massachusetts. A Task Force Report." *Mass. J. Ment. Hlth.,* **3**:3-29, Winter 1973.
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APPENDIX

MICHIGAN COMMUNITY MENTAL HEALTH CENTER*

POLICIES AND PROCEDURES CONCERNING ELECTROCONVULSIVE THERAPY

The committee to review the use of electrical stimulation of the brain (ECT, EST or equivalent) will consider the following in its deliberations: (A more elaborate description of the guidelines are to be found in *Mass. J. Ment. Health.,* **3**:3-29, 1973).

I. INDICATIONS
  A. Affective Psychoses
    1. Manic depressive illness
    2. Involutional melancholia
    3. Psychotic depression
  B. Schizophrenia
    1. Catatonic type
    2. Schizo affective type

II. CONDITIONS FOR WHICH ECT SHOULD NOT BE GIVEN
  A. Characterological or personality problems.
  B. Drug addiction or alcoholism without a diagnosis, above (I).
  C. Depressive reactions (neurotic).
  D. Any condition in children prior to puberty.

III. CONTRAINDICATIONS
  A. Space occupying lesion of the brain.
  B. Active pulmonary inflammation.
  C. Very recent myocardial infarction.

IV. REQUIRED PRETREATMENT EXAMINATION
  A. Full history, psychiatric investigation and physical examination (unless this is precluded by the very rare need for emergency treatment — catatonic excitement).
  B. Lab Work-Up
    1. Hemoglobin
    2. White cell count and differential

3. Serology
4. Urinalysis

C. Chest X-Ray

D. Electrocardiogram for patients over 40 years of age and those under 40 if cardiac pathology is suspected.

E. Skull and spine x-rays, etc. — based on clinical indications.

V. TECHNIQUES

A. Adequate preanesthesia precautions (including the use of atropine).

B. Anesthesia

1. Adequate brief anesthesia (quick-acting barbiturate for example).
2. Complete muscle relaxation (e.g., succinyl choline) prior to electrical stimulation.
3. Oxygenation by means of positive pressure before and immediately after the seizure.
4. Emergency tray adequate to meet the needs of any emergency should be on hand.
5. Presence of an anesthetist unless the psychiatrist is considered competent to administer anesthesia and deal with cardio vascular and respiratory emergencies.
6. Unilateral or bilateral placement of the electrodes should be at the discretion of the psychiatrist administering the treatment.
7. The morning dose of psychotropic drugs should be eliminated (especially phenothiazines or those drugs in combination with ECT which tends to lower blood pressure).
8. More than 12-15 treatments per series in the affective disorders and 25-30 treatments per series in cases of schizophrenia are to be avoided.
9. Adequate aftercare in the hours following each treatment must be assured.

VI. INFORMED CONSENT

Strict adherence to the principle of fully informed consent by the patient and, where possible, by his next of kin or legal guardian is required.

PROCEDURE FOR APPROVAL

The committee of three staff psychiatrists appointed by the department chairman will review each case after a formal request is made by the treating psychiatrist. A majority of the psychiatrists must approve the procedures, based on the above criteria of evaluation, indications and techniques. This approval must be given in writing.

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*Name and address given on request.

Monthly Surveillance Report

Cases of Certain Diseases
Reported to the Michigan Department of Public Health
For the Four Week Period Ending March 28, 1975

	1975 This 4-Week Period	1974 Same 4-Week Period	1975 Total To Above Date	1974 Total Same Date	Total Cases for 1974
Rubella	252	128	568	402	1,388
Cong. Rubella Syndrome	0	0	1	0	1
Measles	588	399	1,159	875	2,365
Whooping Cough	3	0	26	14	104
Diphtheria	0	0	1	0	0
Mumps	1,430	856	4,042	2,664	7,230
Scarlet Fever & Strep Sore Throat	2,841	5,456	8,647	15,186	31,802
Tetanus	0	0	0	1	6
Poliomyelitis (Paralytic)	0	0	0	0	2
Hepatitis	244	350	761	1,067	3,599
Salmonellosis (other than S. typhi)	70	75	225	299	1,001
Typhoid Fever (S. typhi)	0	0	1*	2	11
Shigellosis	64	66	220	276	1,436
Aseptic Meningitis	6	8	21	34	162
Encephalitis	7	6	18	10	69
Meningococcic Meningitis	14	7	32	15	54
H. Influenza Meningitis	10	9	33	36	121
Tuberculosis	79	122	229	328	1,431
Syphilis	143	219	418	861	2,659
Gonorrhea	2,417	2,441	7,728	8,067	32,152

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

Information can be supplied by the local health department on the local incidence of disease.

Maurice Reizen, M.D., Director
Michigan Department of Public Health

*Corrected total.

Perinatal Tips

By Paul M. Zavell, MD
Detroit

The following case from the files of the Wayne County Medical Society Perinatal Mortality Study Committee is presented as an aid in continuing education.

Maternal

This was the first pregnancy of this 22 year old white primipara with O+ blood type. She was blessed with a twin pregnancy which, unfortunately, was complicated by intermittent toxemia (B.P. of 150-160/100-110, occasional mild pedal edema and 1+ to 2+ proteinuria). Control was obtained (apparently well) with bed rest, diuretics and diet.

At 38 weeks gestation her obstetrician noted only one heart beat confirming her fear that only one infant was still alive (for she had noted no movement of one baby for several days).

Two days later she went into labor. After a total labor of 10 hours and 43 minutes she delivered her twins. After delivery of Twin A, Twin B was delivered by mid-forceps because labor had stopped and would *not* restart. Spinal anesthesia using 30 mgm Xylocaine was used. During labor the mother received about 125 cc of whole blood because estimated blood loss was 900 cc and she had had a hemoglobin count of 9.6 gm with a hematocrit of 28. She also received 100 mgm Demerol and 1/150 gr Scopolamine. Post natal recovery medically was uneventful.

Fetal

Twin A was a macerated female stillborn dead for five to six days before delivery because of cord compression. No autopsy was done.

Twin B was a five pound, 12 ounce white male infant. At birth respiration onset was slow despite suction of nose and throat. Muscular tone remained poor and infant was cyanotic even in oxygen. Apgar at five minutes was only 5. Respirations were labored with gruntiness and cry was weak.

Thirty minutes later in the nursery physical exam by the house pediatric resident revealed paleness, petechiae over scalp with bruising of the face and poor Moro. A stat chest x-ray and CBC were ordered. Impression then was "possible aspiration pneumonia."

At one hour of age the infant was noted to be arching his back and this continued for the next 24 hours. By three hours of age grunting and nasal flaring had disappeared but respirations had increased to 80/minute and were abdominal. The chest x-ray was reported as normal, CBC showed Hemoglobin of 9.3 gm, hematocrit of 34, Rbc of 2.52×10^6, WBC of 23,200 with 21 PMN, 14 Bd, 57 Lymph, three Mono, and two Eosinophils.

The previous diagnosis was now changed to "Transient respiratory distress in infant with anemia (? cause)." Cord blood came back as O+, Coombs Negative. By four hours of age 10% D/W by scalp vein was started and he was given 30 cc of packed O+ Rbc's, after a blood culture was drawn. The infant remained afebrile but somewhat lethargic.

At 18 hours of age he voided a concentrated urine somewhat bloody in color but this was discarded. Over the next 24 hours his course changed little except arching gradually disappeared. His Hgb was now 11.2 gm with a Hct of 35. However rapid shallow respirations even in oxygen continued.

By 30 hours of age it was noted his head and eyes were very edematous with some puffiness of both feet present. He sucked poorly and when he did, a right sided facial paralysis was noted. At 36 hours of age because he had failed to improve a repeat chest X-Ray was done. This revealed a bronchopneumonia at the hilar bases with some additional but questionable basilar consolidation and also depression of the diaphragm. Ampicillin 100 gm IV every six hours was started.

About 42 hours of age the infant again started to arch and the anterior fontanelle felt very firm but no true bulging was present. Peripheral edema had disappeared except that the feet felt a little swollen. He was irritable with 90 shallow respirations per minute. His cry was "bleating" like a lamb and jerky movements especially of the left side were now noted. Because of this, an L.P. was done that revealed 4390 Rbc's, eight WBC's, 16 glucose and 50 Protein. Electrolytes were Na=124, K=8.2, Cl=94, CO_2=15. A repeat Hgb was 9.6 gm and an EKG showed "Right venitricular preponderance." The blood culture report now came back as being normal.

At 46 hours of age while the intern was preparing to give 15 cc more of packed Rbc's the infant had a cardiac arrest. Ten minutes later despite external cardiac massage and intracardiac adrenalin, he was pronounced dead.

(Continued on page 261)

Doctor Zavell is a member, Neo-Natal and Hospital Care Committee, Michigan Chapter, A.A.P. He is chairman, Perinatal Mortality Study Committee, Wayne County Medical Society.

The Cervical Thymus

By Harry Maisel, MD, ChB
H. Yoshihara, MD
D. Waggoner, MD
Detroit

There is increasing awareness that persistent cervical thymus tissue must be considered in the differential diagnosis of a lump in the neck especially in children.[1,2]

In a study of human fetuses for the presence of congenital malformations our attention was drawn to the wide variation in form and location of cervical thymus tissue. In this report we describe several cases that illustrate this variation and the potential clinical significance.

Materials and Methods

Human fetuses collected in the Department of Anatomy, Wayne State University School of Medicine, were fixed in 10% formalin and studied. Sixty-seven fetuses of 220-340 mm C-R length were dissected. There were 30 females and 37 males. Where appropriate, tissues were embedded in paraffin and sectioned. The sections (6μ thick) were stained with hematoxylin and eosin.

Results

Cervical prolongation of the thymus has been classified into the following types[3]: Type 0, no cervical prolongation; Type 1, left or right prolongation not reaching the thyroid gland; Type 2, left or right prolongation reaching the thyroid gland; Type 3, bilateral prolongations not reaching the thyroid gland; Type 4, bilateral prolongations, one side reaching the thyroid gland; and Type 5, bilateral prolongations to the thyroid gland *(Figure 1)*. Ellis and Knight[3] also classified discrete nodules of thymic tissue according to position with respect to the thyroid gland.

In this study of 67 fetuses, the incidence of the various type of thymus was as follows: Type 0 — 6%; Type 1 — 9%; Type 2 — 10%; Type 3 — 27%; Type 4 — 30%; Type 5 — 10%. An additional form shown as Type 6 in *Figure 1* was found in 7% of cases. In this type, the cervical thymus extends on one or both sides superior to the thyroid gland. There were no differences in thymus type with respect to sex or side. Discrete nodules of thymus tissue were found in any of the types at or below the lower pole of the thyroid gland. Such a discrete nodule below the lower pole of the thyroid gland is shown in Type 4 on the left side. A Type 0 thymus with a nodule below each lobe of thyroid is also shown in *Figure 1*. Another type is seen in *Figure 2 (c)*. In this case the thymus extends anterior to the trachea to reach the left lower pole of the thyroid gland, while on the right side the thymus exists as a discrete nodule at the lower pole of the thyroid gland.

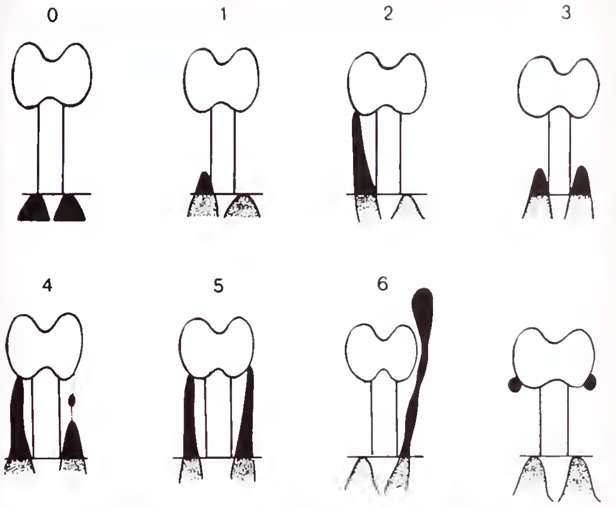

Fig. 1. Diagrammatic representation of cervical thymus types, modified from (Ellis and Knight[3]). Type 6 is proposed as an additional category. The last diagram in Row 2 represents a Type 0 thymus with bilateral subthyroid nodules. Note that the cervical thymus prolongation in Types 1, 2, and 6 may be on the right or left sides.

In five fetuses (four female and one male) the thymus gland consisted of a normally located mediastinal mass, connected by a narrow cord of thymus tissue to a suprathyroid cervical expansion *(Fig. 2a, b, &3)*. In each instance the connecting cord was incorporated in the carotid sheath. The cervical expansion was deep to the sternomastoid and digastric muscles, and extended to the base of the skull. It covered the origin of the 10th, 11th, and 12th cranial nerves and the internal carotid artery, but was deep to the internal jugular vein and the occipital artery. In one specimen, a connecting branch between the 10th and 12th cranial nerves passed through the substance of the thymus *(Fig. 3)*. In two specimens the cervical expansion was on the left side, and in neither case was there a connection to the posterior aspect of thyroid gland. In the third specimen, found on the right side, there was a connection to the posterior aspect of the thyroid gland. Histological sections showed that the cord and the cervical expansion

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Doctors Maisel, Yoshihara, and Waggoner are with the Department of Anatomy, Wayne State University School of Medicine, Detroit. Their study was supported by a grant from the Birth Defects Center, Department of Gynecology and Obstetrics, Wayne State University School of Medicine.

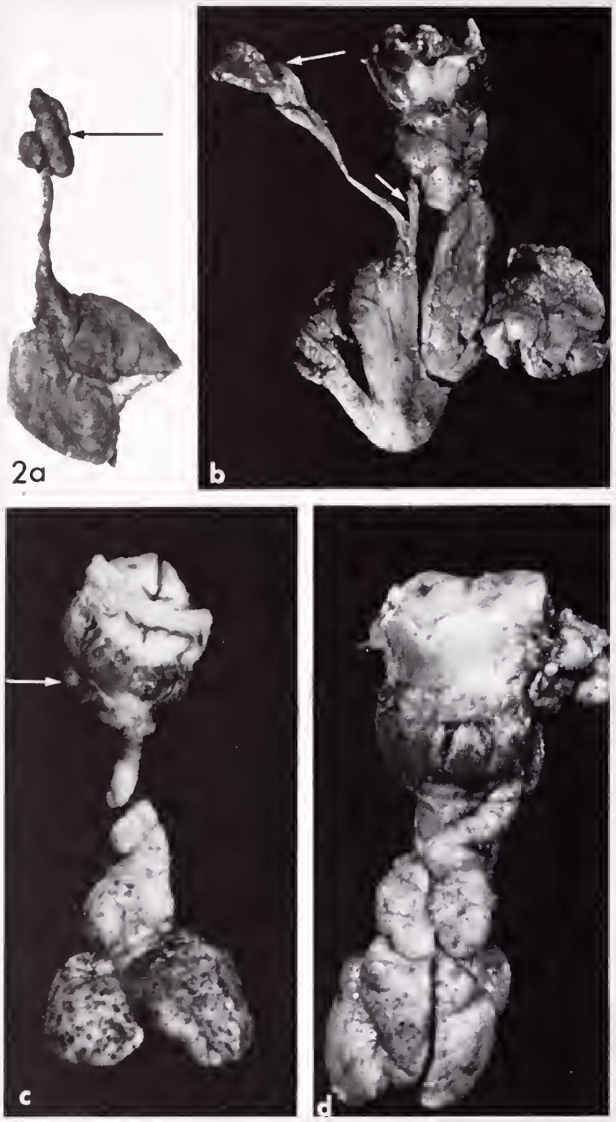

Fig. 2 (a) Cervical thymus Type 6. The cervical expansion which extends to the base of the skull is indicated by the arrow. (male fetus 265 mm CR length)

(b) Cervical Type 6. Note that there is a connection extending to the posterior aspect of the thyroid gland. (female fetus 260 CR length)

(c) Cervical thymus of Type 2 with discrete nodule at the right lower lobe of the thyroid gland, indicated by arrow. (male fetus 220 CR length)

(d) Cervical thymus Type 4 illustrates the course taken anterior to the trachea by the left cervical thymus. (female fetus 310 CR length)

consisted of normal thymus tissue. Parathyroid tissue was found in each case in the cervical expansion. Normally placed inferior parathyroids were also identified in each case on the side of the cervical thymus.

The thymus shown in *Figure 2(d)* illustrates the course taken by the cervical thymus gland anterior to the trachea. This was palpated as a fullness in the suprasternal region.

Discussion

The thymus arises as a pair of primordia from the ventral portion of the third pharyngeal pouch. At about the 10mm stage the third pouch has separated from the pharynx, and its dorsal portion has begun to differentiate into parathyroid tissue. During the seventh and eighth weeks of development, the thymus elongates caudally and ventromedially, until by the end of the eighth week the advancing ends of the primordia meet at the upper margin of the arch of the aorta.[4] After separation of the parathyroid gland tissue (embryos of about 20mm) each thymic rudiment possesses a thinner cranial and broader caudal half. The cranial portion represents the cervical thymus.[5]

The results obtained in this study with respect to the variation in position and form of the thymus agree closely with the data obtained by Ellis and Knight.[3] The commonest forms were Type 3 and Type 4; and no difference with respect to side, or sex was noted. Indeed, this study supports the observation that cervical prolongation of the thymus in infants can be regarded as a normal occurrence.[3]

Persistent cervical thymus tissue usually remains symptomless and is rarely of sufficient size to be recognized clinically. It then presents as a palpable mass in the neck along a line extending from the angle of the mandible to the manubrium sterni.[2] Surgical exploration must be carefully done keeping in mind the close relationship of the cervical thymus to the great vessels of the neck and cranial nerves. The cases in *Figures 2 and 3* are examples of extensive distribution of cervical thymus tissue, reaching to the jugular fossa in the base of the skull.

In view of the role of the thymus in the maturation of the immune system it has been suggested[6] that in children a cervical thymus mass should not be completely excised unless it can be determined that other thymus tissue is present in the body. Such a decision, however, must be weighed against the dangers from persistence of a large mass in the neck.

Barrick and O'Kell[7] reviewed 41 cases of thymic cysts and persistent cervical thymus tissue. Twenty-eight cases were reported in children. Of the 38 cases reported as thymic cysts, 30 were located in the neck and the remainder in the mediastinum. It has been suggested that the cysts arise from cystic changes in cervical thymus tissue. Barrick and O'Kell[7] concluded that although thymic cysts and persistent cervical thymus are uncommon, their frequency in children make them an important consideration in the differential diagnosis of lateral neck masses.

Persistence of thymic tissue anterior to the trachea is also of clinical significance. Thompson and Love[8] described a four-month old infant with a midline suprasternal cervical mass apparent only when the infant cried. This mass on exploration was found to be normal thymic tissue. The location of such thymic tissue must also be kept in mind in tracheostomy.

The third variation of potential significance involves persistence of thymic tissue as a nodule at the lower pole of the thyroid gland *(Fig. 2c)*. Such tissue may be confused with a thyroid nodule or malignancy.

Summary

The variation in position of the thymus gland was studied in 67 human fetuses and the clinical significance discussed.

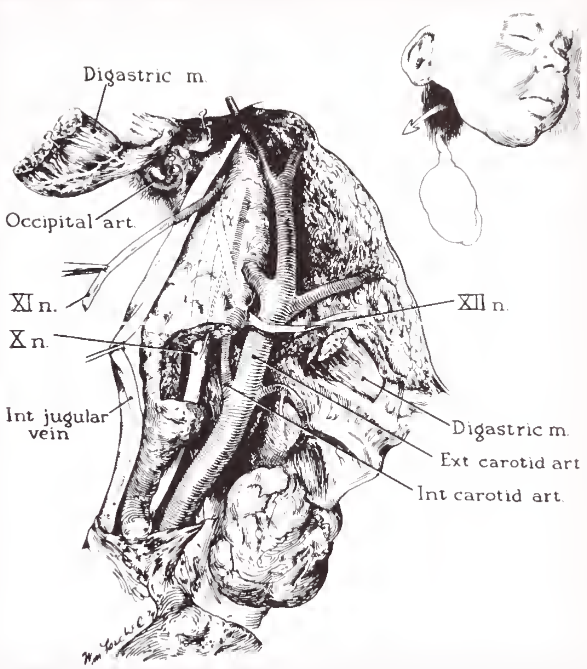

Fig. 3. Diagrammatic representation of the anatomical relations of the cervical expansion of Type 6 thymus.

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PERINATAL TIPS/*Continued*

Clinical diagnoses were "Bronchopneumonia, neonatal anemia, cause undetermined and possible congenital heart disease." An autopsy was done that revealed extensive generalized hemorrhage of the lungs and adrenals and findings compatible with aspiration pneumonia.

Perinatal Committee Comments

1. Although use of diuretics and diet with bed rest worked well here for this mother's toxemia, care should be taken with use of this regimen (especially if salt-free diet is used) to avoid any electrolyte problems developing insidiously in the mother.
2. When it was assumed one twin was dead at 38 weeks suggested studies to help confirm this such as fetal monitoring (i.e., EKG's, etc.) and x-rays for fetal disintegration should be considered.
3. Mid-forceps delivery is very rarely used and indications for its use very restricted. High forceps have been abandoned.
4. With a twin pregnancy and a hemoglobin of 9.6 gm it is doubtful blood was needed for this mother (despite the estimated 900 cc blood loss during labor and delivery). Blood transfusions do carry real risks (especially, for example, serum hepatitis). Use of oral iron might have been in order here.
5. The anemia of 9.3 gm in Twin B was not satisfactorily explained during life. Additional hematologic studies (other than a CBC only) as well as the diagnosis of fetal bleeding *before* birth could have been considered.
6. A concentrated urine especially if "somewhat bloody" in a newborn should be examined for abnormalities and not discarded as useless. Perhaps clues to G.U. pathology (i.e., renal thrombosis) might be obtained.
7. Any infant who has had a difficult birth and then exhibits a continued failure to improve despite appropriate oxygen and nasal-pharyngeal mucus suctioning should alert one to possible infection. Appropriate cultures (throat, urine, spinal) should be obtained and antibiotics then started. In an infant we cannot rely on signs and symptoms of infection as seen in older children.

MSMS Maternal Health Conference Draws 1,000

Nearly every seat was taken when the 14th annual Michigan Conference on Maternal and Perinatal Health was presented late in March by MSMS. 1,000 persons registered for the popular event in the Grand Rapids Civic Auditorium and Pantlind Hotel.

Many physicians were in attendance, although nurses comprised the major portion of the audience. They heard talks on infection and its effects on the fetus and newborn, fetal and perinatal research, and the challenges in perinatal care.

An attorney's viewpoint was presented by Earl J. Cline, JD, Flint, left, while Kenneth VanderKolk, MD, Grand Rapids, right, was part of the welcoming committee. Other speakers came from Minneapolis, Louisville, Bethesda and several Michigan cities.

A gala Monte Carlo party was staged between scientific meetings, with participants enjoying dinner, piano entertainment and the chance to spend $25,000 play money apiece at Black Jack, wheels of chance and bingo. Winners were able to turn in their cash for authentic prizes at the conclusion.

Acupuncture for the Treatment of Deafness

By Pang L. Man, MD
John H. Gaeth, PhD
Montra Kanok, MD
Northville

Synopsis

Acupuncture has been widely publicized for its "miraculous cure" in the treatment of deafness through the news media in the last two years. Many scientific studies are being carried out in this country to evaluate the effect of this treatment modality. The authors' study on five deaf-mute children over a period of three months in a blind control manner conclude that there is no improvement in any one of them and, therefore, they will not recommend acupuncture treatment for the deaf.

Acupuncture analgesia for the relief of pain and its applications in surgery and dentistry have received tremendous attention throughout the world. Its effectiveness has been well documented in the recent literatures. However, acupuncture treatment for different diseases, although widely practiced in China and other parts of the world, including the United States, has not been closely investigated in the scientific way. The Chinese based their impressions primarily on clinical observations over thousands of years.

The recent wave of acupuncture "mania" affects all walks of life in this country, particularly those suffering from incurable diseases. A misconception arises to the point that acupuncture is being considered in some people's mind as a panacea. The treatment of deafness via acupuncture gained great momentum after the news media reported some miraculous "cure." After hearing or reading all these positive reports, the deaf persons are so desperate for help that they will flock to any place to seek help, regardless how far the distance, how much the expenses involved, and whether or not the practitioner (acupuncturist) is reputable or just money hungry. This communication reports our findings after a three months' study on deafness.

Doctor Man is Director of Research, Northville State Hospital, and clinical assistant professor of psychiatry, School of Medicine, Wayne State University. Doctor Gaeth is professor and chairman, Department of Audiology, and Dr. Kanok is clinical assistant professor, ENT Department, School of Medicine, Wayne State University.

Methodology

A group of five children, age between 10 and 11 years old, three boys and two girls, suffering from congenital deafness, volunteered for the study. The diagnoses were firmly established over these years. The following procedures were followed exactly for all children:

(1) Complete and detailed ear examinations as well as physical examinations were carried out prior to the treatment. The ENT examination including polytomography of both ears and X-ray of the mastoid was normal. Routine blood and urine tests were within normal limits. Audiometry included pure tones and speech.

(2) Only one ear was treated, leaving the other as a control.

(3) The independent rater (audiologist) was blind as to which ear was being treated, and both the parents and patients were cooperative and did not give any hint to the rater.

(4) The audiometric tests were conducted as follows:

- (a) prior to the treatment
- (b) six weeks after the start of treatment (mid-point of treatment)
- (c) three months after the start of treatment (at conclusion of treatment)

The independent rater kept the scores to himself until the end of the project.

(5) The children's intelligence are assessed as two about average, and the other three extremely bright.

(6) The following classical acupuncture points are selected, namely, ERH MEN, International code SC-23; I FENG, International code SC-17; TING KUNG, International code IT-19 and TING HUI, International code VF-2. (See drawing) Only two points (form a pair) were needled during each treatment period. The other pair was chosen for next treatment. They were needled on an alternating basis.

(7) An electric acupuncture stimulator, Acu-Aid, made in this country, generating 2 Ma. sinewaveform with 50 Hz, was used for the investigation.

(8) The patients were treated twice a week, well-spaced apart during the week, for 30 minutes each time. The amount of current was increased stepwise every five minutes.

(9) An informed consent was signed by both parents.

Table 1
Acupuncture Study

Patient A

Pre-Test 1/3/70

February-May, 1974

Right Ear

Date	125	250	500	1000	2000	3000	4000	8000	SRT	Discrim	Level	Material
1/30/74	75	80	95	105	105	100	100	CNT	95	88%	105	Digits
4/16/74	75	80	95	105	105	100	100	CNT	80	92%	106	"
5/07/74	70	85	90	100	100	95	95	CNT	80	88%	106	"
Left Ear												
1/30/74	80	80	90	105	CNT	CNT	CNT	CNT	85	76%	105	Digits
4/16/74	80	80	90	105	CNT	CNT	CNT	CNT	80	60%	106	"
5/07/74	80	85	95	105	CNT	CNT	CNT	CNT	78	64%	106	"
Bone Conduction												
1/30/74		25	55	CNT	CNT	CNT	CNT					
4/16/74		35	60	CNT	CNT	CNT	CNT					
5/07/74		35	60	CNT	CNT	CNT	CNT					

CNT/DNT—Could or Did Not Test.

B/C responses are probably vibro-tactile.

All values, except discrimination scores, are in dB re normal, ANSI, 1969.

Table 2
Acupuncture Study

Patient B

Pre-Test 8/15/66

February-May, 1974

Right Ear

Date	125	250	500	1000	2000	3000	4000	8000	SRT	Discrim	Level	Material
8/15/66	60	70	80	90	CNT	CNT	CNT	CNT				
2/05/74	CNT	CNT	95	100	100	100	105	CNT	80	24%	105	Digits
2/20/74	65	80	90	100	105	100	105	CNT	80	60%	105	"
3/13/74	80	90	95	105	100	100	110	CNT	80	52%	105	"
4/16/74	70	90	95	100	105	100	CNT	CNT	80	60%	100	"
5/07/74	75	85	100	100	105	100	110	CNT	84	36%	100	"
Left Ear												
8/15/66	55	75	85	90	85	100	95	CNT				
2/05/74	75	85	100	110	CNT	CNT	CNT	CNT	75	4%	105	Digits
2/20/74	70	80	95	110	CNT	110	110	CNT	80	56%	105	"
3/13/74	75	80	85	110	CNT	110	110	CNT	80	64%	105	"
4/16/74	75	85	100	110	CNT	CNT	CNT	CNT	80	56%	100	"
5/07/74	75	85	95	105	CNT	CNT	CNT	CNT	84	36%	100	"
Bone Conduction												
8/15/66		DNT	DNT	DNT	DNT	DNT						
2/05/74		35	CNT	CNT	CNT	CNT						
3/13/74		40	60	CNT	CNT	CNT						
5/07/74		40	CNT	CNT	CNT	CNT						

CNT/DNT—Could or Did Not Test.

All values, except discrimination scores, are in dB re normal, ANSI, 1969.

Table 3

Acupuncture Study

Patient C — Pre-Test 7/1/70 — February-May, 1974

Date	125	250	500	1000	2000	3000	4000	8000	SRT	Discrim	Level	Material
Right Ear												
7/01/70	25	25	35	55	65	70	70	70	42	62%	68	PBK-50
2/08/74	30	35	50	55	70	75	75	70	45	92%	75	"
4/16/74	25	25	40	60	80	75	75	75	44	72%	74	"
5/07/74	25	25	40	60	80	80	75	70	42	80%	72	"
Left Ear												
7/01/70	25	30	40	60	60	65	65	70	48	72%	74	PBK-50
2/08/74	30	35	50	65	70	70	70	80	45	100%	75	"
4/16/74	40	40	60	65	65	65	70	85	48	84%	78	"
5/07/74	35	35	45	60	60	60	60	80	46	82%	76	"
Bone Conduction												
7/01/70		15	25	55	65	DNT	60					
2/08/74		5	35	55	CNT	"	60					
4/16/74		5	25	50	65	"	60					
5/07/74		5	25	60	55	"	50					

CNT/DNT—Could or Did Not Test.

All values, except discrimination scores, are in dB re normal, ANSI, 1969.

Table 4

Acupuncture Study

Patient D — Pre-Test 10/30/73 — February-May, 1974

Date	125	250	500	1000	2000	3000	4000	8000	SRT	Discrim	Level	Material
Right Ear												
10/30/73	DNT	80	90	95	105	DNT	105	CNT	80	82%	?	Digits
2/05/74	75	85	95	100	110	110	CNT	CNT	80	84%	105	"
4/16/74	80	90	100	95	105	105	CNT	CNT	80	92%	106	"
5/07/74	75	85	100	100	CNT	CNT	CNT	CNT	84	68%	106	"
Left Ear												
10/30/73	DNT	75	90	100	105	DNT	105	CNT	92	CNT	?	
2/05/74	75	85	100	100	105	110	CNT	CNT	80	32%	105	Digits
4/16/74	80	90	105	105	100	CNT	CNT	CNT	86	48%	106	"
5/07/74	75	85	100	100	105	CNT	CNT	CNT	90	32%	106	"
Bone Conduction												
2/05/74		30	55	CNT	CNT	CNT	CNT					
4/16/74		35	60	CNT	CNT	CNT	CNT					
5/07/74		35	55	55	55	55	55					

CNT/DNT — Could or Did Not Test.

BC responses are probably vibro-tactile.

All values, except discrimination scores, are in dB re normal, ANSI, 1969.

Table 5
Acupuncture Study
Patient E Pre-Test 3/17/72 February-May, 1974

Date	125	250	500	1000	2000	3000	4000	8000	SRT	Discrim	Level	Material
					Right Ear							
3 17 72		70	95	105	CNT		CNT	CNT	66	CNT		
2 05 74	75	85	95	110	110	110	110	CNT	70	24%	105	Digits
4 16 74	75	80	110	CNT	CNT	CNT	CNT	CNT	86	24%	100	"
5 07 74	80	CNT	110	CNT	CNT	CNT	CNT	CNT	72	24%	106	"
					Left Ear							
3 17 72		75	95	CNT	CNT	CNT	CNT	CNT	74	CNT		
2 05 74	75	80	110	110	110	110	CNT	110	75	16%	105	Digits
4 16 74	75	80	110	CNT	CNT	CNT	CNT	CNT	86	20%	100	"
5 07 74	80	90	110	CNT	CNT	CNT	CNT	CNT	80	8%	106	"
					Bone Conduction							
2 05 74		40	60	65	CNT	CNT	CNT					
4 16 74		35	CNT	CNT	CNT	CNT	CNT					
5 07 74		35	55	CNT	CNT	CNT	CNT					

CNT DNT — Could or Did Not Test.

B C responses are probably vibro-tactile.

All values, except discrimination scores, are in dB re normal, ANSI, 1969.

Results

Throughout the three months period all hearing test results remained the same. There was absolutely no change to any significant degree. The following are the test results before, during, and after the study:

Side effects

No adverse side effects were observed. The children tolerated the treatment very well. No fainting spells, no needle breaking, no damage to any nerve was detected.

Discussion

Our study indicates that there is no beneficial effect of acupuncture treatment in deafness. The acupuncture points chosen are the most commonly used for this type of treatment. There is no hypothesis for the mechanism of action in treating the deafness except the ancient meridian theory, Yin and Yang.

Recently Rosen's[1] study in New York on forty children over a period of six months, also produced negative results. Only two show some improvement and one is in the control group. Marcus et al, Fairbanks et al, and Aber's letter[2-4] also have the same conclusion. It seems that we all have the identical results.

Although the Chinese indicate that treatment periods from one to four years would be necessary, and we do not want to dispute the necessity for this long process of treatment period. However, we doubt that any one, including the parents, would participate that far in treatment for periods up to four years. One parent remarked at the end of the investigation, "I am glad it is all over, it is a great relief to see the end." Others expressed more or less the same kind of feeling.

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Emergency Medical Care: A Unique and Proven System

By C. Mark Vasu, MD
Grand Rapids

Introduction

Death of an accidental nature prematurely interrupts the natural attrition rate that propels us from birth to death. Many lives are needlessly squandered particularly by two very important killers — heart disease and trauma. A complacent attitude would indicate that very little can be done to alter this pattern.

Our community's experience has proven that something can be done. The death rate can be reduced, but it takes work. 100,000 accidental deaths and 600,000 heart attack fatalities each year had pointed out the gravity of the situation. In most instances, communities had not faced the reality of a medical emergency nor had they focused attention on the proper training for the rescuer. In fact, many deaths in the United States could be directly linked to improper handling at the scene of an accident or injury. Obviously this was inadvertently and not intentionally promoted by the rescuer. The impetus to improve the knowledge and equipment of the personnel became the prime target of emergency care conscious communities.

Preoccupation with medical-electronic equipment must never be allowed to overshadow the importance of the job to be done and the human skills needed to do it. The trainee must progress from basic skills to sophisticated techniques, and the trainee requirements must be rigid, supervised and well defined. The patient's survival and recovery from the emergency situation is the best guideline to evaluate the performance of the technician rendering care.

There are many Emergency Systems in the United States which include:

1) Fixed base, fire department, emergency personnel.
2) Fixed base, private emergency personnel.
3) Volunteer ambulance personnel.
4) An emergency medical services system separate and distinct from either Police, Fire or Ambulance Agencies.
5) Roving Police Emergency Medical Technicians — The Grand Rapids System.

Each must be suited to the needs of the community with obvious emphasis on developing a total emergency medical care system to provide fast and efficient treatment.

Background

The City of Grand Rapids is a 44 square mile area within the 864 square miles of Kent County. The county's population is approximately 450,000. The highest concentration of population density is in the City of Grand Rapids. Smaller communities or suburbs around the city include East Grand Rapids, Wyoming, Kentwood and Walker. There are four major hospitals in the City of Grand Rapids which include Butterworth Hospital, Blodgett Memorial Hospital, St. Mary's Hospital and Grand Rapids Osteopathic Hospital. The respective bed capacities are: Butterworth Hospital, 570; Blodgett Memorial Hospital, 410; St. Mary's Hospital, 422, and G.R. Osteopathic Hospital, 265.

In the fall of 1968, the Grand Rapids Police Emergency Unit embarked on its mission to render emergency medical care. The Kent County Medical Society, through the efforts of the physicians of the Emergency Medical Services Committee, encouraged and trained 25 young men of the Grand Rapids Police Department to provide emergency service to the community. These men have since devoted themselves to serving others and saving lives. The heavy demands placed on their shoulders are rewarded by their personal satisfaction in a job well done. The policeman's image in Grand Rapids has indeed been altered, enhanced and treated with new respect.

Initially the Police Emergency Unit was a demonstration project to determine its effectiveness. The options available were many, as has been outlined in the above description of available emergency systems.

Why establish a system with the police department? In our community there were many reasons for this choice. The Grand Rapids Police Department had been active in the field of emergency medical care in the late 1950's by virtue of its

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public ambulance service. It seemed natural to consider the police department as the logical choice to develop an emergency medical services system. They are more likely to remain on their jobs and, therefore, present solid credentials of reliability and durability. They are policemen — investigative, inquisitive, curious and absolutely concerned with the welfare of the citizens. They are constantly patrolling or cruising on the street, responsive to police calls. As medical emergencies arise, this becomes of prime importance and they skillfully respond. The average response time is anywhere from three to five minutes. With violent crimes, their police training ensures the handling of evidence with great care while administering emergency care.

In the fall of 1967, after intensive preparation, the Police Emergency Unit with two officers trained in advanced Red Cross training, cardiac resuscitation, hospital emergency room practical experience and many hours of didactic lectures by medical personnel, embarked on its adventure. To ensure proper motivation, physicians from the Kent County Medical Society were present in the unit 12 hours a day for two weeks, carefully explaining each and every emergency medical problem that was encountered by the police officers.

An organization of physicians entitled the "Crash Squad", complete with car stickers to designate the title, was initiated to provide additional physician coverage. Many physicians actually have police radios, sirens and flashers in their automobiles. In the event of any emergency in the county that logically requires a physician in attendance, a call to one of the members by radio or telephone would result in his attendance at the scene. This coverage by the Crash Squad is available 24 hours a day, free of charge. The services of this group have been used less and less since the communication network has improved. As the proficiency of the EMT's has been demonstrated, we find they are able to handle problems without a physician's direct involvement. If the latter is needed, the emergency room can be contacted for assistance via the HEAR radio frequency. In all cardiac cases, the telemetry communication network is always used.

Since 1968, there have been many new and dramatic additions to the training and equipment profile of the Police Emergency Units. One key factor to the program continues to exist. This is the presence of a physician providing weekend duty with the units, each and every Friday and Saturday of the year. This continued professional addition to the team has provided much of the impetus for the men to maintain their enthusiasm and positivity for the program.

Prior to the establishment of the emergency units, all emergency and transportation care was handled by private ambulance personnel, either on a full time basis or part time by local funeral directors. Since the establishment of the emergency unit concept, we now have 12 active emergency units with two more planned by the fall of 1974. These include three with the Grand Rapids Police Department manned by 38 men; six with the Kent County Sheriff's Department manned by 54 men; one with the Kentwood Police Department manned by seven men; two with the Wyoming Police Department manned by 25 men; and one with the East Grand Rapids Fire Department manned by seven men. The units are operated 24 hours a day by two-man crews. Private ambulance personnel account for approximately 10 additional vehicles and 31 men, most trained to our Levels II and III. (Explanations available from author.)

Training

In the late 1960's, the Kent County Medical Society Emergency Medical Services Committee initiated a training program for rescue personnel. The initial intention was to upgrade the quality of training for ambulance personnel and also introduce the police to this responsibility. To assist in this task, the hospitals in Grand Rapids agreed to provide on-the-site practical training. In 1971 the Kent County Medical Society introduced the first complete cardiology course and this was taught by a physician-nurse team.

As the program has progressed, each hospital has expanded and linked into the practical training by providing more of the hospital's facilities. The EMTs rotate through the emergency room, coronary care unit, intensive care unit and autopsy room. Attendance at autopsies preceded by an appropriate lecture prepares them for intracardiac epinephrine injections. They also attend open heart surgery where coronary by-pass vein graft surgery is done daily at two of the major hospitals. They also receive their training in venipuncture and in intravenous techniques at all four hospitals. Instruction in endotracheal and esophageal intubation is also part of the curriculum.

In the fall of 1973, Grand Valley State College offered the EMT and cardiology course. A college certificate and 17 hours of college credit is awarded to the men upon the successful completion of the Dunlap and the Cardiology Course designed specifically for the emergency medical technicians. The certificates are awarded at formal graduation ceremonies at the college. They also receive a distinctive and descriptive patch which is worn on their uniform shoulder. A course curriculum outline is enclosed. The course is approximately 350 hours of training which, at this time, appears to be entirely adequate to maintain the high peak of efficiency expected of an emergency medical technician. This does not include the practical experience received on the scene when a physician is present. The hours involved with this "on the scene" training are innumerable and immeasurable in value. While the accident or injury is fresh, this appears to be the best time for the physician and EMT to discuss it in detail.

The length of the training course in our community has been tailored to suit the needs of the personnel. Ideally, most of the courses taught in the United States are over a span of a four to five month period with usually two months of didactic classes followed by two or three months of "internship". Our personnel have work obligations which do not permit an eight hour class day, so the courses have been arranged to suit their availability.

Generally, they attend classes once or twice a week from 2 to 5 p.m. in the afternoon and 6 to 9 p.m. in the evening. They do this both for the EMT and cardiology courses. The practical experience in the hospitals is programmed on a daily continuous basis. All of the hospital experience is planned for them by a coordinator for emergency medical care for each county who notifies the hospitals and the students as to when they can gain their practical experience. They are graded on their response and quizzed on their exposure experience. A check list of emergencies to attend and observe is given to the men and is completed before they are passed on their practical program.

Currently there is no uniformity of opinion in the United States as to how much training an EMT should have. Some courses run for as many as 900 hours with some of the training being ultrasophisticated. In our observations, the primary concern is the stabilization of the patient, which includes proper diagnosis and treatment at the scene. This is followed by cautious transportation to the hospital for further definitive care. If we find that our EMTs face a vacuum of any clinical information, we expand our practical training exposure. Often times a self critique form filled out by the EMT provides a base to plan future refresher classes. A recertification process yearly is mandatory for all E Unit personnel. A copy of the Kent County Ordinance and the recertification program is available from the author.

Physician involvement in this program at the scene of an accident or injury has a reciprocal effect. The exposure to the EMTs on the street broadens their knowledge. It also gives the physician a better understanding of some of the frustrations facing these men during the acute emergency situation. To see it all happen first-hand makes the physician a better and more sympathetic teacher.

The guidelines of the AMA Emergency Services Committee stated that there are four prime areas of responsibility for emergency medical technicians and hospital medical personnel.

1. *First Aid and Rescue.* This, of course, implies that each man be properly trained before he renders care.
2. *Communication.* This is a vital link to any emergency service and is provided by all of our four hospitals with the emergency units using the HEAR frequency. This VHF frequency allows all E unit personnel to directly communicate with the physician in the emergency room. Telemetry is defined specifically for cardiac care and is on the UHF frequency. All four hospitals are also part of this system. Our equipment list (available from author) includes particulars of this communication equipment.

   At the present time, our communication network involves dispatchers for each and every "E Unit" system as listed. It must be emphasized that not only are members of the Police Emergency Unit highly trained but, in addition, all police, sheriff's officers and firemen in Kent County receive advanced Red Cross training and cardiac resuscitation instruction. Often times when an emergency call is initiated, a routine patrol car may be in close proximity and it responds. We have many instances of proper cardiopulmonary resuscitation (CPR) being given by a non-E unit police officer while the emergency unit was enroute. In contrast to this, often times the district police officer first to arrive on the scene can quickly assess the situation and, if it appears to be a very minor emergency, he can either tell the emergency unit to slow down or at times to even disregard the call, that no emergency exists.
3. *Transportation.* This is by the private ambulance services. The E units do not transport at any time. All private ambulance personnel are the responsibility of two private companies and one volunteer ambulance service in Kent County. The level of their training includes EMT and cardiology. However, not all personnel with the ambulance companies are Level III trained. (The Ambulance Ordinance for Kent County, effective July 21, 1974 defines the Levels I, II and III.) The problem of high turnover rates among ambulance personnel seems to be perennial and no obvious answer to solve this disturbing feature of ambulance care is apparent at this time. Currently, all ambulance companies must include at least one Level II trained individual on each ambulance. As a general rule, an E unit person accompanies the ambulance personnel to the hospital during the transportation process.
4. *The Emergency Facility.* This is the fourth part of the total emergency medical care system, and all of our hospitals have excellent emergency rooms. They are staffed full time

by physicians. With this staff and high quality equipment, including radio communication, they deliver superior emergency medical care. They maintain a close liaison with E unit personnel and often extend the teaching process during an acute care encounter.

Public Education

This subject has been one of our prime targets in the last few years. It is important that every member of the community understand how an emergency medical service functions. Daily publicity is in the newspaper. The article noted in this paper, titled "Save A Life", lists symptoms of various medical emergencies plus the proper number to call for emergency care. The news media, which include the local newspaper and all the television stations, have been most cooperative in this public education process. Telephone numbers are also placed prominently in the front page of the telephone directory and local community campaigns have placed an adhesive sticker bearing these numbers on every phone in their community. The optimum communications network should include the telephone number, "911", which has been recognized nationally as an emergency number through the cooperation of the American Telephone and Telegraph Company. Arrangements are currently being made to institute the 911 system in the Kent County area. Another public educational program has been an intensive effort to train people in the community in the technique of cardiopulmonary resuscitation. We have approached all age groups starting with sophomores in high school, with a particular emphasis on families who have members with known coronary disease.

Rescue

One important key to personal injuries in automobile accidents involves extrication. The Grand Rapids Fire Department and surrounding Fire Departments in the city and county are fully equipped with highly sophisticated rescue equipment and it is their prime responsibility to remove the patient from entrapment. As has been previously stated, all firemen are also trained in advanced Red Cross training and cardiac resuscitation. In the last few months, many of the fire department personnel have been trained as EMTs with the Dunlap Course. Police officers are eligible for LEEP funds (Law Enforcement Education Program) which are controlled by the LEAA (Law Enforcement Assistance Administration). This national group finances the officers. Thus there is no local city or county expenditure for tuition.

Cost

The approximate cost of putting a mobile emergency and intensive care system into operation is approximately $20,000. This includes the cost of the vehicle and field equipment which includes all the equipment that is listed on the equipment sheet. At the present time, the cost of maintaining these units is largely the responsibility of the respective police and fire departments. All drugs, intravenous solutions and electronic equipment are exchanged by the hospitals. The primary charge to the patient is for drugs and equipment used during the emergency. The ambulance charges are separate. They are based primarily on transportation and continued care to the hospital.

To date 116 paramedics have been trained and certified by the Kent County Medical Society Emergency Services Committee and Grand Valley State Colleges. The cost of training each emergency medical technician is $221. (Total of 17 hours at Grand Valley State Colleges — $13 for each credit hour). This is a base cost and, to date, none of the physicians or the hospitals have received compensation for their involved interest and teaching activities. Compensation is currently under consideration for these groups.

Experience

As has been noted, there are 12 emergency units operating in Kent County. This increased to 14 units by the fall of 1974.

To date, we can document a 30-35% decrease in automobile accident mortality in our community in the last three years. This was noted before the maximum 55 mile an hour speed limit was put in effect. After the Kent County Sheriff's Department E Units had been activated in the Fall of 1973, we noted a striking decrease in mortality and morbidity in Kent County. It is indeed difficult to specifically relate numerical statistics in reference to heart disease because our goal is to reach the patient before cardiac arrest occurs. We are sure many patients who would have had lethal arrhythmias are alive today because of stabilization with intravenous fluids, intravenous lidocaine and cardiac monitoring. So far in the 1973-74 period we have had 10 documented Class I patients (cardiac arrests) sucessfully resuscitated. These individuals for the most part have returned either to work or to their previous life style.

Legislation

The Kent County Ambulance Ordinance, updated in July, 1974, applies also to the EMTs of the police and fire department emergency units. All E unit personnel are Level III trained. The important features of the ambulance ordinance require Level II trained personnel on all ambulances.

One universal problem has been the rapid turnover rate among ambulance personnel. Most are

Number of Physicians & Ratios to Population
As of 12/31/73

	WAYNE	RATIO	OAKLAND	RATIO	MACOMB	RATIO	STATE	RATIO	IDEAL RATIO
Family Practice	453	5,998/1	172	5,372/1	57	11,191/1	1,796	5,081/1	2,000/1
Internist	456	5,958/1	252	3,666/1	66	9,665/1	1,314	6,945/1	5,000/1
Obstetrics-Gynecology	250	10,868/1	158	5,847/1	46	13,867/1	769	11,867/1	11,000/1
Pediatrics	172	15,796/1	118	7,830/1	26	24,535/1	581	15,706/1	10,000/1
General Surgery	279	9,738/1	136	6,793/1	38	16,787/1	926	9,855/1	10,000/1
Total #of MDs All Specialties	3,007	904/1	1,678	551/1	359	1,777/1	10,014	911/1	

Data extrapolated from AMA Physician Data Tape.
Source of "Ideal Ratio" — *Medical Economics,* 1973.

MSMS Bureau of Economic Information
March 4, 1975

EMERGENCY CARE/*Continued*

dedicated, but for one reason or another resign and are replaced by an inexperienced and untrained person. Close cooperative efforts between the E unit and the ambulance company is a must to insure patient safety and optimum care. All ambulance companies must notify the emergency units when they are initially dispatched for all heart attacks and breathing problems. This insures that at least two Level III Personnel will be on the scene to render care.

On October 10, 1974, Governor William G. Milliken signed into law H.B. 5732. This law is comparable to the Wedworth-Townsend Paramedic Act for the state of California. This legalizes the activities of EMTs in the field of emergency medical care.

Summary

The police emergency unit concept for our community has proven to be unique and highly practical. Highly skilled teams of college trained, physician-supervised police officers render emergency care for trauma and illness with remarkable expertise. The roving, constantly on duty concept has distinct merits. It does provide a low cost system to ensure the delivery of emergency medical care to a community with a minimum of confusion and a maximum of efficiency.

Special acknowledgement is noted herewith for Mrs. Candace Otte, RN; Frederick A. Doornbos, MD; Ramon B. Lang, MD; Lee R. Pool, MD; John R. Wilson, MD, and P. Roderick Smithson, the EMT County Coordinator.

(Further details of the Kent County Emergency Medical Training Program including course outlines, records of emergency unit calls, equipment needed, and field to hospital calls are available from the author and from MSMS.)

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‘Improving the Climate’

– Or, Some Personal Observations On Long-Range Solutions To Malpractice Suits

The editors of *Michigan Medicine* asked the following persons to share with MSMS members their most specific suggestions for long-range action to alleviate and avoid the malpractice suit situation. Here are their contributions:

Frequent Sources of Suits Against Anesthesiologists

By George J. Chatas, MD
Ann Arbor

Anesthesiologists are rated in liability insurance Class V. This dubious distinction has resulted in a high degree of awareness of medicolegal problems among anesthesiologists. A recent text covers the subject in detail.[1]

I would like, however, to focus on some frequent sources of professional liability suits against anesthesiologists. During its deliberations in October 1973 the Committee on Professional Liability of the American Society of Anesthesiologists expressed the opinion that four items constituted the most common source of medical liability in our speciality. These are: (1) dental injury, (2) cardiac arrest, (3) position palsies and (4) halothane jaundice.

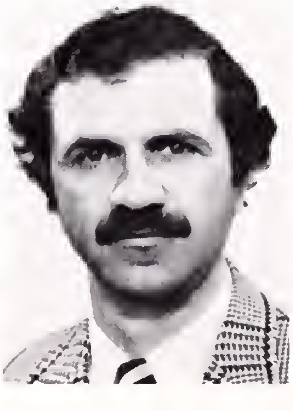
Dental Injuries

Injury to the teeth occurs most commonly during laryngoscopy for endotracheal anesthesia, as a result of the use of oro-pharyngeal airways and as a result of the use of gags. The anesthesiologist should strive to maintain a constant awareness of the potential for dental injury. This begins with an examination of the mouth, teeth, jaw and neck sometime prior to induction. The patient's susceptibility to injury should be noted on the record. It has been recommended that patients be warned of this potential injury prior to induction. Also recommended is the use of a tooth guard and the use of an assistant to help maintain proper positioning during laryngoscopy for intubation. Recovery room personnel should be instructed to be aware of possible dental injury from oral airways in particular. Whenever dental injury should occur, the fragments must be recovered. If they cannot be located, chest and abdominal x-rays should be taken to verify their location. Bronchoscopy is indicated to remove fragments located in the lung.

The problem of dental injury was discussed in a pamphlet[2] from The Medical Protection Society of London, England. The American Society of Anesthesiologists was impressed enough with that pamphlet to distribute it to its membership.

Cardiac Arrest

The possible causes of cardiac arrest are too numerous and complex to cover here, so I would prefer to emphasize early detection, where so many strides have been made in recent years. Many new and sophisticated monitoring devices have been developed. These devices are now available in compact and portable models. Some of the monitors available include those for ECG, pulse, direct arterial pressure, temperature and neuromuscular transmission. Not so sophisticated, but very valuable, monitoring is obtained through the use of the precordial stethoscope or the esophageal stethoscope attached to a molded ear piece. All of these devices offer forms of continuous monitoring. I personally favor the precordial or esophageal techniques because of their simplicity and constant contact with the patient.



Doctor Chatas is president, Michigan Society of Anesthesiologists, Inc.

Another important aspect of cardiac arrest prevention and detection is the presence of warning and "fail-safe" devices on our anesthetic machines, ventilators and monitoring apparatus. Such warning devices should eventually be included on all anesthesia apparatus. Many disasters will be prevented by these devices.

Position Palsies

Injuries to the nervous system are a constant threat to the unconscious patient. These injuries are generally due to stretch or pressure. The anesthetized patient is unable to respond to the pressure or tingling that would warn him during normal sleep. He also has loss of muscle tone so that he can be positioned in a manner conductive to injury. Peripheral nerves to the extremities are the most frequently involved.

The brachial plexus is most often injured by stretching when the arm is abducted, extended, and extremely rotated, and the head is turned to the opposite side.[3] The nerves are subjected to stretch as they pass under the clavicle, under the pectoralis minor tendon, or around the head of the humerus. The obvious answer to preventing this type of injury is to avoid the positions mentioned above. This is true whether the patient is in supine, prone or lateral position. Particular attention should be used to avoid abduction beyond 90°. The vigilant anesthesiologist will prevent the surgeon or his assistant from moving beyond safe limits.

Optic nerve injury can result in blindness.[4] This injury is most regrettable since it is a preventable and tragic complication. It occurs most commonly due to increased orbital pressure transmitted from a misplaced ring or headrest over the eye when the patient is in the prone position. Increased pressure for as short as five minutes is adequate to cause retinal artery occlusion. The obvious method of preventing this complication is an awareness on the part of the anesthesiologist of the danger and careful avoidance of pressure over the orbit.

Halothane Jaundice

It is difficult to understand how medical malpractice can be demonstrated in cases of jaundice following halothane anesthesia. It has never been proven that the occurrence of jaundice following halothane is in any way the direct result of that anesthesia. The multiplicity of drugs, use of transfusions, or pre-existence of hepatitis confuse the issue. As unreasonable as it may seem, this is still the cause for negligence claims.

The only means of avoiding this possibility is abstinence, which is totally unrealistic when one considers the value of this outstanding anesthetic agent. Short of this, one may consider the warnings published in the folder as published by the manufacturer. These include: avoiding the use of fluothane when a previous exposure was followed by fever and jaundice or when there was an unexplained postoperative fever.

I will close by recommending that malpractice suits can be prevented in anesthesiology, as in any other field, by following well established principles. These include establishment of a good physician-patient relationship, anticipation of hazards and maintenance of good records.

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Psychiatrists' Art Has Lessons for All MDs

By George F. Newman, MD
Dearborn

Anxiety is part of living, and the fear of losing life, of being helpless, grows with pain, sickness, or body change. Our patient's fear is often not spoken, and we may be misled by the cheerful, joking patient, or the picture of 'quiet strength.'

Fear is fed by not knowing and in its place are imaginings and misconceptions picked up from well-meaning friends and writers which aggravate anticipation of disability. Of particular note because it is often not mentioned, is the fear of loss of sexual function following a surgical procedure. The treatment may be more feared than the disease.

Doctor Newman is vice president, Michigan Mental Health Society, chairman, Wayne County Medical Society Committee on Mental Health, and chief of psychiatry at Oakwood Hospital, Dearborn.

Fear and ignorance may lead to more primitive responses, such as unquestioning faith or hostile mistrust. Feeling overwhelmed by adversity, humans seek help from their God or their physician. Their Diety may appear immovable, but their commissioned saviour, their doctor, had better produce!

These factors are summarized by attorney friends who tell me of a triad of client complaints which may lead to litigation. First is an adverse result of treatment; second is the feeling in the mind of the patient and of sympathetic listeners who may some day constitute a jury that "this shouldn't have happened." Add to this a patient who feels disappointed, hurt and angry towards the doctor. Good legal counseling can often alleviate the pressure to punish the physician legally because of a predominantly emotional state; but with some, either the facts or the fantasy, plus strong feelings, lead to the court room.

The moral in prevention seems to be in the quality of the physician-patient relationship. This is where the psychiatrist has some advantage. He has the time, the disposition and the training to listen. He deals deliberately with those negative, often hidden feelings which may block patients' progess towards health. He gives information as fully as possible.

Hopefully, he dispels magical thinking with awareness of his limitations and attempts to alleviate feelings of helplessness and futility by enlisting his patients' active participation in striving for health and growth of mental strength through understanding. Many psychiatrists make themselves dependably and willingly available in moments of panic, but through this trusting dependence, work towards autonomy.

I realize that it is easy to speak from a position of not 'laying on' hands or the knife, but the art of dealing with mental suffering by psychological means cannot be ignored anywhere in medicine, and I present these guidelines that have been of use to me.

(Continued on page 281)

Pro-Banthīne®
brand of
propantheline bromide

Indications: Pro-Banthīne is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution. Fever and possibly heat stroke may occur due to anhidrosis.

Overdosage may cause a curare-like action, with loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted. Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthīne.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

How Supplied: Pro-Banthīne is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

SEARLE **Searle & Co.**
San Juan, Puerto Rico 00936

Address medical inquiries to: G. D. Searle & Co.
Medical Department, Box 5110, Chicago, Ill. 60680 481

"Antiacid" action for ulcer patients...

one of the many things you need in an anticholinergic.

Pro-Banthīne is considered adjunctive in total peptic ulcer therapy that may include diet, conventional antacids, bed rest, and other supportive measures.

Pro-Banthīne is provided in several different dosage forms which will meet virtually any clinical need. It is just as versatile in filling patient needs, among which are:

"Antiacid" action — Pro-Banthīne® (propantheline bromide) reduces gastric secretory volume and resting total and free acid.

"Analgesic" action — Pro-Banthīne helps to control the acid-spasm-pain complex.

Vigorous anticholinergic action — Pro-Banthīne® Vials, 30 mg., are for intramuscular or intravenous use when prompt and vigorous anticholinergic action is required.

Mild anticholinergic action — Pro-Banthīne® Half Strength, 7.5 mg. tablets, for more exact adjustment of maintenance dosage in mild to moderate gastrointestinal disorders.

Pro-Banthīne®
(propantheline bromide)

a good
option
in peptic
ulcer

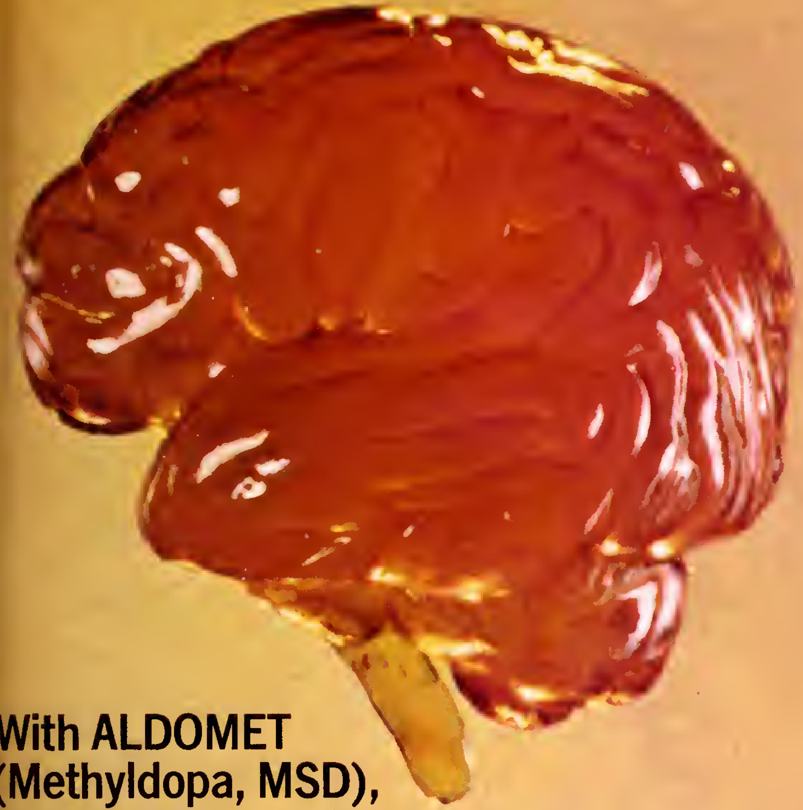
In most cases of sustained moderate hypertension, ALDOMET® (METHYLDOPA | MSD) usually offers more than effective lowering of blood pressure…

With ALDOMET (Methyldopa, MSD), existing renal function is usually unchanged

ALDOMET has no direct effect on renal function. When used in effective doses, ALDOMET usually does not reduce glomerular filtration rate, renal blood flow, or filtration fraction.

With ALDOMET (Methyldopa, MSD), cardiac output is generally unchanged

ALDOMET has no direct effect on cardiac function. When ALDOMET is used in effective doses cardiac output is usually maintained with no cardiac acceleration; in some patients the heart rate is slowed.



With ALDOMET (Methyldopa, MSD), symptomatic postural hypotension is infrequent

ALDOMET reduces both supine and standing blood pressure. Less frequent symptomatic postural hypotension is experienced with ALDOMET than with many other antihypertensive agents. Exercise hypotension and diurnal blood pressure variations rarely occur.

for sustained moderate hypertension

TABLETS, 250 mg and 500 mg

ALDOMET®
(METHYLDOPA|MSD)

NATIONAL HIGH BLOOD PRESSURE MONTH
MAY 1975

a unique antihypertensive agent

Contraindications include active hepatic disease and known sensitivity to the drug. Use with caution in patients with a history of liver disease or dysfunction. Not recommended in pheochromocytoma or pregnancy.
It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

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For a brief summary of prescribing information, please see following page.

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addendum

to further simplify therapy for many patients

now available
ALDOMET® 500 mg
(METHYLDOPA|MSD)

- **often more practical to prescribe**
- **easier for patients to remember**

Now offered in addition to the standard 250-mg tablet, the new ALDOMET 500 mg tablet is a patient convenience. An especially important one, since in hypertension convenience of the dosage schedule is one factor that can make the difference in compliance of the patient. The minimum daily dose of ALDOMET is 250 mg b.i.d. The usual starting dose is 250 mg t.i.d. Dosage is adjusted as necessary by adding or deleting 250 mg or 500 mg at intervals of not less than two days. The maximum dose is 3.0 g per day.

Examples of b.i.d. or t.i.d. dosage convenience provided by ALDOMET 500 mg within the usual daily dosage range of 500 mg to 2.0 g:

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(Methyldopa/MSD)
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1.5-g daily dose =

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sig: one tablet t.i.d.

2.0-g daily dose =

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(Methyldopa/MSD)
sig: two tablets b.i.d.

℞ *ALDOMET 500 mg*
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sig: one tablet q.i.d.

NOTE: Tablets shown are not actual size.

in sustained moderate hypertension

ALDOMET® (METHYLDOPA|MSD)

usually lowers blood pressure effectively

Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis. Known sensitivity. Not recommended in pheochromocytoma. Unsuitable in mild or labile hypertension responsive to mild sedation or thiazide therapy. Use cautiously in patients with history of previous liver disease or dysfunction.

Warnings: **It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.**

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between six and twelve months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at six and twelve months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first three weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first two to three months of therapy. In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first six to twelve weeks of therapy or whenever an unexplained fever occurs. If fever, abnormalities in liver function tests, or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, reversible reduction in leukocyte count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur.

Use in Pregnancy and Childbearing Age—Not recommended in pregnancy. In women of childbearing age, weigh potential benefits against possible fetal hazards.

Precautions: Methyldopa may interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, spuriously high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has occurred after dialysis in patients on methyldopa because the drug is removed by this procedure.

Adverse Reactions: Sedation, usually transient, may be seen during initial therapy or when dosage is increased. Headache, asthenia, or weakness may be noted as early, transient symptoms. Symptoms associated with effective lowering of blood pressure are occasionally seen and include dizziness, lightheadedness, and symptoms of cerebrovascular insufficiency. Angina pectoris may be aggravated. Symptoms of orthostatic hypotension may occur; if symptoms occur, reduction of dosage is suggested. Bradycardia, nasal stuffiness, mild dryness of mouth, and gastrointestinal symptoms including distention, constipation, flatus, and diarrhea occur occasionally; these generally can be relieved by reducing dosage. Nausea and vomiting have been reported in only a few patients. Sore tongue or "black tongue," pancreatitis, and inflammation of salivary glands may occur.

Weight gain and edema occur infrequently and are relieved by administering a thiazide diuretic; if edema progresses or signs of pulmonary congestion appear, discontinue drug. A rise in BUN has been observed. Other rare reactions include breast enlargement, lactation, impotence, decreased libido, skin rash, mild arthralgia, myalgia, paresthesias, Bell's palsy, parkinsonism, psychic disturbances including nightmares, reversible mild psychoses or depression. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Note: Dosage should be limited initially to 500 mg daily when following previous antihypertensive agents other than thiazides. Maximal recommended daily dose is 3.0 g. Patients with impaired renal function may respond to smaller doses than patients with normal kidney function. Syncope in older patients has been related to increased sensitivity in those with advanced arteriosclerotic vascular disease; this may be avoided by lower doses. Tolerance occasionally seen either early or late, but more likely between second and third month after initiation of therapy; increased dosage or combined therapy with a thiazide frequently restores effective control.

How Supplied: Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., INC., West Point, Pa. 19486

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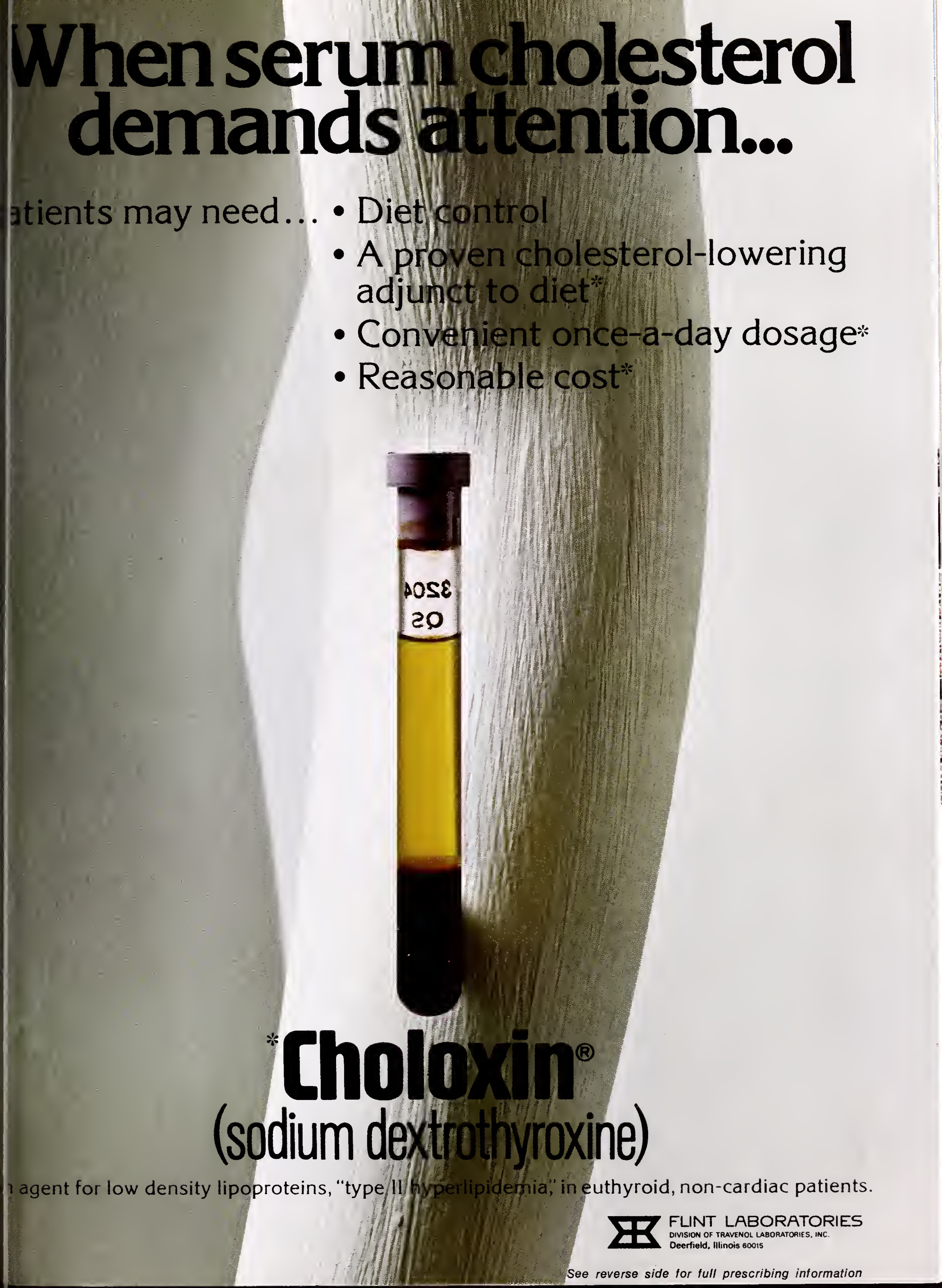

When serum cholesterol demands attention...

atients may need...
- Diet control
- A proven cholesterol-lowering adjunct to diet*
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*Choloxin®
(sodium dextrothyroxine)

agent for low density lipoproteins, "type II hyperlipidemia," in euthyroid, non-cardiac patients.

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See reverse side for full prescribing information

Choloxin® (sodium dextrothyroxine)

The Lipid-Lowering Agent with Once-A-Day Dosage

Four strengths . . . 1, 2, 4, and 6 mg. . . . are available making the scored tablet regimen a flexible dosage system. And, for most patients, CHOLOXIN tablets offer once-a-day dosage.

AN IMPORTANT NOTE:
It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

CHOLOXIN® (sodium dextrothyroxine) Single-Tablet-A-Day Dosage Schedules

See prescribing information in package insert reproduced below.

	Starting Dosage	Increased Monthly by	Usual Maintenance	Maximal Recommended
Adult Hypercholesterolemic	1.0-2.0 mg.	1.0-2.0 mg.	4.0-8.0 mg.	4.0-8.0 mg.
Pediatric Hypercholesterolemic	0.05 mg./kg. body weight	0.05 mg./kg.	0.1 mg./kg. body weight	4.0 mg.
Hypothyroid Cardiac	0.5-1.0 mg.	1.0 mg.	4.0 mg.	4.0 mg.

Choloxin™

(sodium dextrothyroxine)

Description

CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine. It is chemically described as D-3,5,3′,5′-tetraiodothyronine sodium salt.

Actions

The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

Most of the available evidence indicates that CHOLOXIN stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces. Cholesterol synthesis is not inhibited and abnormal metabolic endproducts do not accumulate in the blood.

Indications

This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication

Before prescribing, note the following: Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively in patients with significant myocardial impairment. CHOLOXfN dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications

The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease, including angina pectoris; history of myocardial infarction; cardiac arrhythmia or tachycardia, either active or in patients with demonstrated propensity for arrhythmias, rheumatic heart disease; history of congestive heart failure, and decompensated or borderline compensated cardiac status
2. Hypertensive states (other than mild, labile systolic hypertension
3. Advanced liver or kidney disease.
4. Pregnancy.
5. Nursing mothers.
6. History of iodism.

Warnings

CHOLDXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 3D% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care Special consideration of the dosage schedule of CHOLOXIN is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN. As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients, and in surgery in hypothyroid patients in whom it may be advisable to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who had required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age

Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug; it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions

It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly, they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHOLOXIN for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions

The side effects attributed to dextrothyroxine therapy are, for the most part, due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient, although its relationship to CHOLOXIN therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN; a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration

For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN is approximately 0.1 mg per kilogram. The initial daily dosage should be approximately 0.05 mg per kilogram to be increased in up to 0.05 mg per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

How Supplied

CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4, and 6 mg tablets.

FLINT LABORATORIES
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Deerfield, Illinois 60015

Education Essential in Interpersonal Skills

By Robert B. Carbeck, MD
Ann Arbor

How might graduate medical education reduce the possibility of a malpractice law suit? A simplistic answer comes immediately to mind: improve educational programs which will produce higher quality physicians.

A number of studies have already been conducted to identify those behaviors on the part of physicians that most commonly lead to malpractice suits.[1] The most common fall into the category of poor interpersonal relationships.

Having identified the area of interpersonal skills as one containing the basis for many malpractice suits, what educational programs will be effective? Many medical schools have, or have had, courses in the art of medicine, but the proper time for this type of educational experience is during graduate medical education (residency and fellowship).

An essential part of any such program must be motivation and the most effective form of motivation is demonstrating to the learner (resident) the need for these skills. To be effective, he must actively participate in any such program. Thus, an effective educational program must incorporate demonstrated need to know and active participation.

A number of graduate education programs have accomplished this educational goal through model group practices in which each resident is responsible for providing continuing, comprehensive care to a small group of his own patients.[2] Effective supervision and teaching by attending physicians who have themselves developed good interpersonal skills are a critical part of such a program. The Family Practice Residencies have been outstanding in the development of such models.

New methods are being developed for the evaluation of the resident's interpersonal skills levels.[3] These instruments are essential for those involved in the development and implementation of such programs. The certifying bodies of several specialties, especially the primary care specialists, are in the process of developing and validating various evaluation instruments for skills in this area.[4]

Recognizing that many malpractice suits are not due to any behavioral deficiency on the part of the physician, can anything be done about these? Good records are perhaps the strongest defense in such instances. The acceptance of more logical forms of medical record keeping, such as the Problem Oriented Medical Record, has been a major advance in this area. The acceptance of this modification has been rapid. Recently, the American Board of Internal Medicine has made such a logical form of record-keeping mandatory and has required that directors of graduate medical education programs objectively evaluate these record keeping skills.[5] Further, they require that each resident must be proficient in these skills before he/she is allowed to take the written examination of the Board.

In summary, graduate medical education programs can reduce the frequency of malpractice suits. This can be accomplished, to some degree, through better achievement of the traditional educational goal of knowledge transfer. Of much greater importance, however, is education in those interpersonal skills which are essential for a good doctor-patient relationship. Skills in logical, efficient record keeping, such as the Problem Oriented Medical Record, must also be learned. Good records are essential for those instances in which malpractice suits are inappropriately brought against the physician.

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Doctor Carbeck is chief, Department of Internal Medicine, St. Joseph Hospital, Ann Arbor and is president-elect of the Michigan Association for Medical Education.

Countering the Coming 'Legal Onslaught'

By Richard A. Kitch, LLB Detroit

As inconceivable as it may sound, many members of the medical community still remain totally unaware of the proportions of the "Malpractice Crisis" which exists today. A mere scanning of the media will reveal the fact that an explosion of malpractice claims has taken place, that the number and size of the awards being made to patients has vastly increased and that throughout the United States, liability insurance carriers are abandoning, on a wholesale basis, professional liability coverage.

Innumerable hours have been spent and thousands of words spoken in discussing the causes and solutions, but they have brought about few beneficial results. It is obvious on review that a total solution to this "crisis" is not presently obtainable.

It is, therefore, a necessity that medicine be practiced today with a full awareness of not only the medical aspects, but the possible legal implications. The climate is such that the medical-legal ramifications of medical practice can no longer be ignored.

Unfortunately, most doctors are not equipped by medical school training or otherwise to give proper consideration to the potential legal pitfalls overshadowing the practice of medicine today. Traditionally, the medical schools have considered their role to be the teaching of medicine in its purest form, as envisioned by Hippocrates. Doctors have been taught that they need not fear any challenge to care rendered to a patient, if such is carried out in conformity with what the doctor (as opposed to the patient or the courts) believes to be in the "best interest" of the patient. The law, however, does not accept in many instances this philosophy and time and time again, liability is imposed upon a physician, even though he has acted in the "best interest" of the patient. It is mandatory under the presently existing situation that:

1) Medical schools incorporate a practical (as opposed to theoretical) medical-legal course within their curriculum;

2) Every hospital medical staff, state and county medical society and specialty society include within their educational programs on a regular basis, seminars devoted to the updating of the audience on the most recent and troublesome medical-legal problems.

Medical Records

One of the areas in which such an educational course would bear fruit would be with respect to the preparation of medical records. Poor medical records are one of the things which most stimulates the plaintiffs' bar to institute innumerable malpractice actions. A plaintiff's attorney can detect the sweet smell of successful litigation when he observes a medical record which is in such a condition that he can foresee the ability to convince a lay jury that the records themselves support an allegation of professional negligence. Doctors and hospital personnel are not trained in preparing medical records to consider the medical-legal ramifications of what they are recording. Most record entries are made merely to fill up space and satisfy a Record Committee or a Nursing Supervisor that a doctor or nurse is fulfilling his, or her, obligation to make certain entries. The content of the entries, or how same may be interpreted in a medical-legal situation, is given little or no consideration. An all-out educational program in this regard cannot help but reduce exposure to a malpractice action from this source.

Guilt Complex

The "crisis" facing medicine today is, in part, related to a hypercritical attitude which has been successfully engendered into the profession by the plaintiffs' bar. As a result, many physicians have adopted the attitude that it should be assumed that virtually every complication which occurs in the course of medical care was the result of negligence, unless the physician or hospital involved can unequivocally prove otherwise. This has resulted in an abundant supply of medical witnesses (in addition to the usual prostitutes) available to the plaintiffs' bar in what would ordinarily be recognized on objective evaluation as a nonmeritorious malpractice claim. An appropriate educational program would serve as a basis for exploring the legitimate role of the physician asked to condemn medical treatment rendered by others.

Time is fast running out. The medical community must take immediate steps to prepare itself to counter the legal onslaught which it faces.

Mr. Kitch is with the Detroit legal firm of Kitch and Suhrheinrich, PC.

FMGs Must Contribute to Solution, Too

By Yvan J. Silva, MD, FRCS (C), FACS Detroit

The practice of medicine in the United States is unique with regard to legal matters that may arise in the professional relationship between doctor and patient. In most countries, the phenomenon of patient suing the physician is unheard of.

The disparity of patients' attitudes towards physicians in this country compared to those the FMG has experienced in the country from which he received his medical degree leaves FMGs initially shocked. This aspect of their professional life leaves them threatened in the carrying out of their duties and adds yet another facet to the cultural confrontation they face in the adaptation to living in the United States.

Unfortunately, FMGs have continued to face a subtle discriminatory mood displayed by the professional and lay media. Repeated analyses of FMG performance on examinations have been interpreted to suggest that the FMG is inferior in knowledge, competence and ability to deliver health care. Very few positive comments have been made to balance the essential contributions the FMG presence has made with regard to manpower needs, teaching, research, and other scholarly activities.

The crisis proportions of the current state of professional litigation have left FMGs in yet another separatist quandary. Yet it is obvious that acquisition of licensure, board certification and hospital staff appointments imply equality in professional acceptability for all medical practitioners. It is also obvious that FMGs accepted into graduate education positions have been certified by the ECFMG, the only accepted yardstick at the present time.

FMGs comprise a variegated spectrum of individuals with inherent differences in language, culture, religion, race and indeed the methodology of medical training. Their only common bond is the practice of medicine. They cannot be studied, discussed or decided upon as a homogeneous group.

Legal attitudes do not differentiate between the FMG and the USMG. FMGs on temporary visas are bound by the laws of the country as well as permanent residents and citizens.

Of obvious importance is acceptance of the current state of affairs regarding professional litigation. FMGs must contribute their share towards the resolution of the situation by dedicated involvement. It is important for the FMG to know that he need entertain no fear as long as he can maintain the standard of knowledge, ethics and methods of practice comparable with other physicians in the community. The FMG must realize that there is no stigma to being sued, since the institution of a lawsuit does not imply a breach in professional ability.

Of 107 reported court decisions involving professional liability in 1972, only 8 of 125 identified defendants were graduates of medical schools outside the U.S. and Canada. Of 58 unsuccessful defendants, five were born outside North America. The study concluded that there were no factors indicating what kind of physicians were more likely to be sued or, if sued, more likely to be successful.[1] Although professional litigation has attracted much more attention recently, there is no evidence that the FMG is more vulnerable.

The FMG must become familiar with basic information pertaining to the laws to which he is professionally subject. The definitions of negligence, reliance, rights and privileges of patients, and consent are essential to know.

The physician's duties in response to a subpoena and his duties in a courtroom should be familiar to any physician in practice. The legal implications of medical practice have been described specifically for FMGs in a recent publication.[2]

The most effective method against the unsuccessful outcome of litigation is the ethical conduct of medical practice within the community. The AMA Committee on Medico-Legal Problems has published a set of guidelines for physicians called "21 Prevention Commandments." The FMG is urged to study these guidelines carefully.[3]

Rapid enculturation is highly desirable for the FMG so that his transition towards functioning effectively in his life in the U.S. is smooth. Acceptance of the varieties of socially different value systems, social mores and behavior can lead to non-judgmental professional doctor-patient relationships. FMGs who have been raised with the wide gap between physicians and para-medical

Doctor Silva is director of medical education at Detroit General Hospital, and associate professor of surgery at Wayne State University School of Medicine. He also is president, American Association of Foreign Medical Graduates.

personnel must soon learn the team concept operative in practice here. Effective communications with patients and their families are essential. FMGs should be aware of current medico-social trends such as the definition of death, attitudes towards death and dying, abortion and euthanasia.

In summary, in spite of the unpleasant climate of professional litigation, the FMG is not especially vulnerable. Safeguards against litigation are best employed by a sincere approach towards the delivery of care commensurate with standards in the community. Experience over the past 15 years has shown that FMGs collectively, while performing essential contributions towards the delivery of health care, have been relatively uninvolved in political action in support of their profession. It is indeed time for FMGs to make their contribution by dedicated involvement in seeking a reasonable and impassioned solution to the problems the profession is facing in the area of professional litigation.

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2. Silva, Yvan J.: Career Development for Foreign Medical Graduates in the United States, Springfield, Illinois. Thomas, 1973, pp. 95-107.
3. Ibid. pp. 105-107.

(Continued on page 286)

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MD May Exhibit 'Malpractice Syndrome'

By Dean F. Boardman
Shelby, Ohio

Studies in California have shown that most suing patients have certain psychological characteristics in common. They are basically unstable, afraid of illness and death. They distrust doctors and think they charge too much. They visit their doctors more frequently, change doctors more often, blame their doctors when their recovery is slower or less complete than they feel it should be. They generally feel that they don't get enough attention and yet often fail to follow their doctor's instructions. They get along poorly with themselves and others. We often refer to them as suit-prone people who are not only likely to sue their doctor for malpractice, but will sue anyone if they feel wronged.

Interestingly, though, the studies recorded that almost all of the suing patients claimed they would not have sued if the doctor had admitted his mistakes to them, had explained carefully what had happened or gone wrong and would have apologized to them for the error.

On the other side of the "malpractice syndrome," however, is the suit-prone doctor. The symptoms are these: He believes that a doctor should be "God-like," he is annoyed at the need for keeping accurate and complete records, he dislikes other doctors in general, he finds it difficult to admit that he couldn't cope with a patient's problem and expresses displeasure at the impositions placed upon him by thoughtless, stupid patients. He feels that the sole source of malpractice suits is the greedy, vindictive or neurotic patient who, with the help of an unscrupulous attorney, conspires to blacken his reputation and extort from him huge sums of money. If something does go wrong and the patient is injured or thinks he is injured, he sees no reason why he should admit he was wrong or why he should apologize to the patient or his family.

When the "malpractice syndrome" is present in either the patient or the doctor, the chances for a malpractice suit are great. If in both, the situation is hazardous and if there is a real accident or even a disappointment in treatment or results, it is disastrous.

What can be done to combat the "malpractice syndrome"? Obviously you can hardly refuse to treat a patient just because you think he might sue you. You can, however, look for signs of "suit-proneness" in yourself and in your patients and take steps to minimize the danger.

When the symptoms are present in the patient, be especially careful. Deal firmly with patient anger and understandingly with patient fear. If something goes wrong, understand and accept the emotional reactions of the patient and his family. Be sympathetic and flexible and — when appropriate — be willing to adjust fees to fit family needs and medical realities. Take time to explain to the patient what results can reasonably be expected. You are in the best position to correct misconceptions from publicity attending miraculous cures and television doctors that never lose a patient.

Above all, try to maintain a good doctor-patient relationship.

It is a rather strange paradox that at a time when medical science has reached such high plateaus of achievement malpractice actions should have at the same time reached such astronomical proportions. Legislative reforms are needed and hopefully will be enacted which will improve the climate, but they are not the entire answer. There are precautions which you can take in your daily practice. The following suggestions have all been developed as the result of actual malpractice claims:

1. Accept your limitations.
2. Don't criticize another practitioner until you know all the facts.
3. Do not rest an important diagnosis on a clinical impression alone if reliable diagnostic aids are available.
4. Allow no preventable delay in diagnosis of cancer.
5. Never promise a cure.
6. Exercise great care in the selection of assistants and in the delegation and supervision of their duties.
7. Do not, in the absence of emergency, perform any additional operative procedure not expressly or implicitly authorized.
8. If emergency is to be relied upon to justify an operation, it is well to secure the opinion of one or more qualified consultants, if at all possible. The legal defense against action brought as the result of an unauthorized operation is that (1) the operation was required to save life, and (2) there was not sufficient time to get consent from the patient or someone qualified to act for him.
9. Keep accurate and concise notes.
10. Be realistic in assessing and collection of fees.

(Continued on page 288)

Mr. Boardman is assistant secretary of the Shelby Mutual Insurance Company, which insures approximately 20% of Michigan physicians, but has said it will not renew any MDs' policies beginning June 1.

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In fact, there are no known contraindications to the use of Vasodilan in recommended oral doses, other than that it should not be given in the presence of frank arterial bleeding or immediately postpartum.

---

1. Gertler, M. M., et al.: Geriatrics *25*:134-148 (May) 1970.

Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Adverse Reactions: On rare occasions, oral administration of the drug has been associated in time with the occurrence of severe rash. When rash appears, the drug should be discontinued. Occasional overdosage effects such as transient palpitation or dizziness are usually controlled by reducing the dose.

Supplied: Tablets, 10 mg.—bottles of 100, 1000, 5000 and Unit Dose; 20 mg.—bottles of 100, 500 and Unit Dose.

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Restoring Prestige and Credibility

By Julien Priver, MD
Detroit

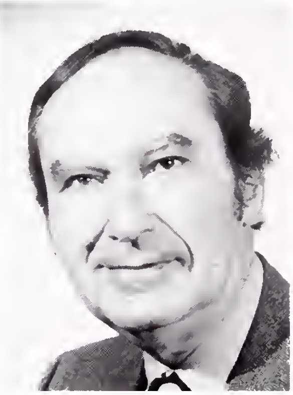
In an effort to contribute to this worthy attempt to restore sanity to the troubled world of medical practice, I am setting forth some suggestions based on personal observations of over a quarter century in the hospital milieu.

1. *Know the Patient.* In addition to being aware of his chemistry, x-rays, and physiological signs, there is a great need to learn how the patient is feeling. Should one not also avoid making him think he is being "abandoned" once the diagnosis is made and the therapy instituted? During convalescence, and while undergoing discharge planning, as the physicians' visits may become less frequent, will the patient believe he is no longer "interesting"?

2. *Keep in Harmony.* One doctor talks of operating; the other thinks it may not be necessary. Physicians in groups, who often "cover" each other, may serve the same patient who is now thoroughly confused. Do they not have the opportunity (and the duty) to coordinate the therapeutic alternatives under consideration before dropping contradictory remarks?

3. *"Speak No Evil."* One need hardly be reminded of an old proverb — "The tongue is the throat's worst enemy." Exercise extreme care regarding statements or comments about patients made within earshot of persons not privileged to hear them — ANYWHERE!

4. *Informed Consent.* Resistance to this concept by physicians is still considerable. Infinite patience should be exercised to explain fully the course to be expected — and the major pitfalls, alternatives, complications, and side-reactions



Doctor Priver is executive vice president, Sinai Hospital in Detroit, and former chairman of the board, Michigan Hospital Association.

(Continued on page 296)

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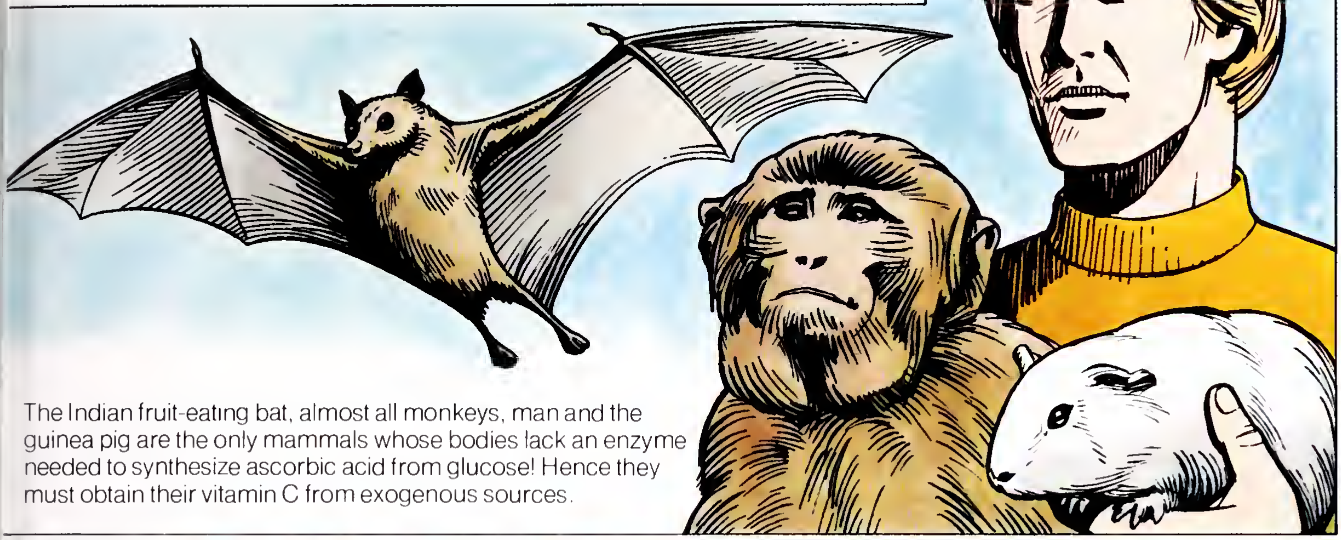
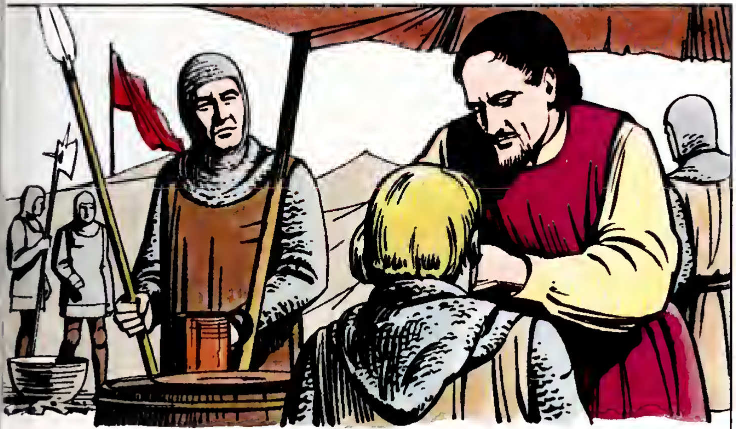
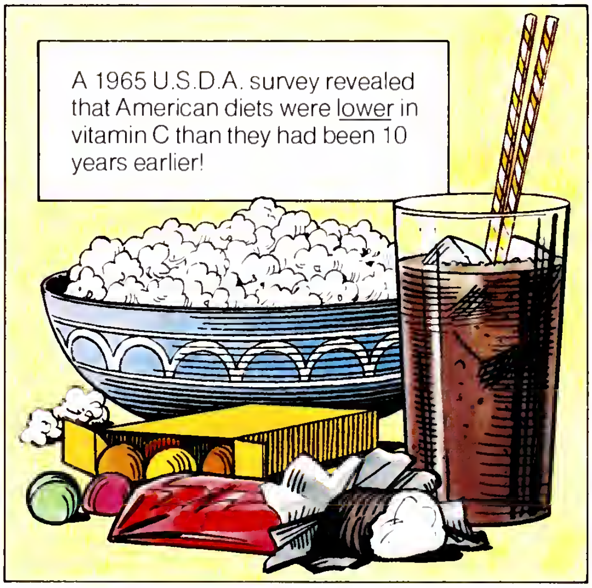


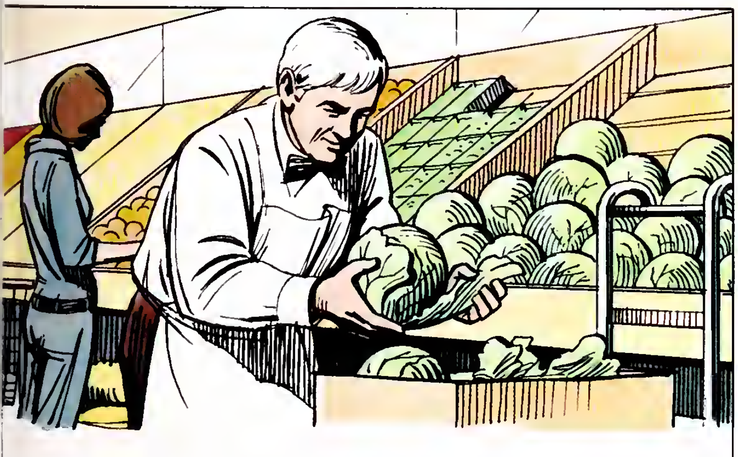
The Indian fruit-eating bat, almost all monkeys, man and the guinea pig are the only mammals whose bodies lack an enzyme needed to synthesize ascorbic acid from glucose! Hence they must obtain their vitamin C from exogenous sources.



De Joinville writing about a 13th century crusade reported that barber surgeons had to "cut away the dead flesh from the gums to enable people to masticate their food." The disease he described was probably scurvy.



A 1965 U.S.D.A. survey revealed that American diets were lower in vitamin C than they had been 10 years earlier!



The outer leaves of cabbage and brussels sprouts contain more vitamin C than the heads. Yet, ironically, these are often trimmed away by the grocer to improve appearance and enhance sales appeal! Many housewives trim them even more before cooking!

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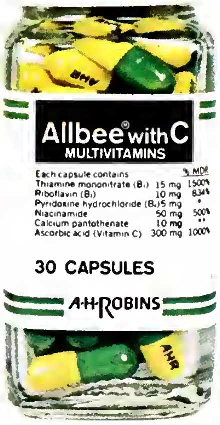
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phenobarbital (warning: may be habit forming)	(¼ gr.) 16.2 mg.	(½ gr.) 32.4 mg.	(¾ gr.) 48.6 mg.

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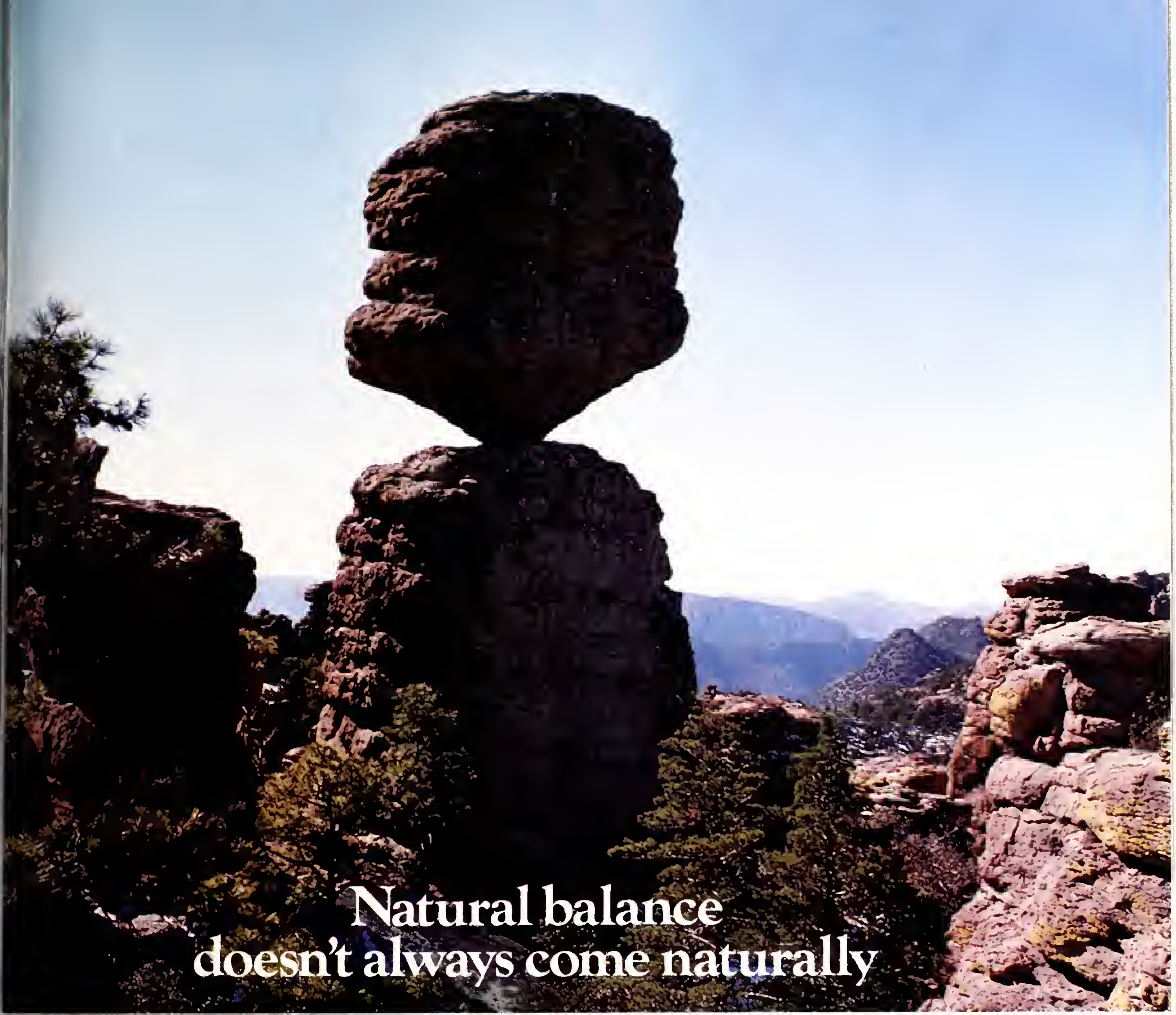

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Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

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Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported

More detailed professional information available on request.

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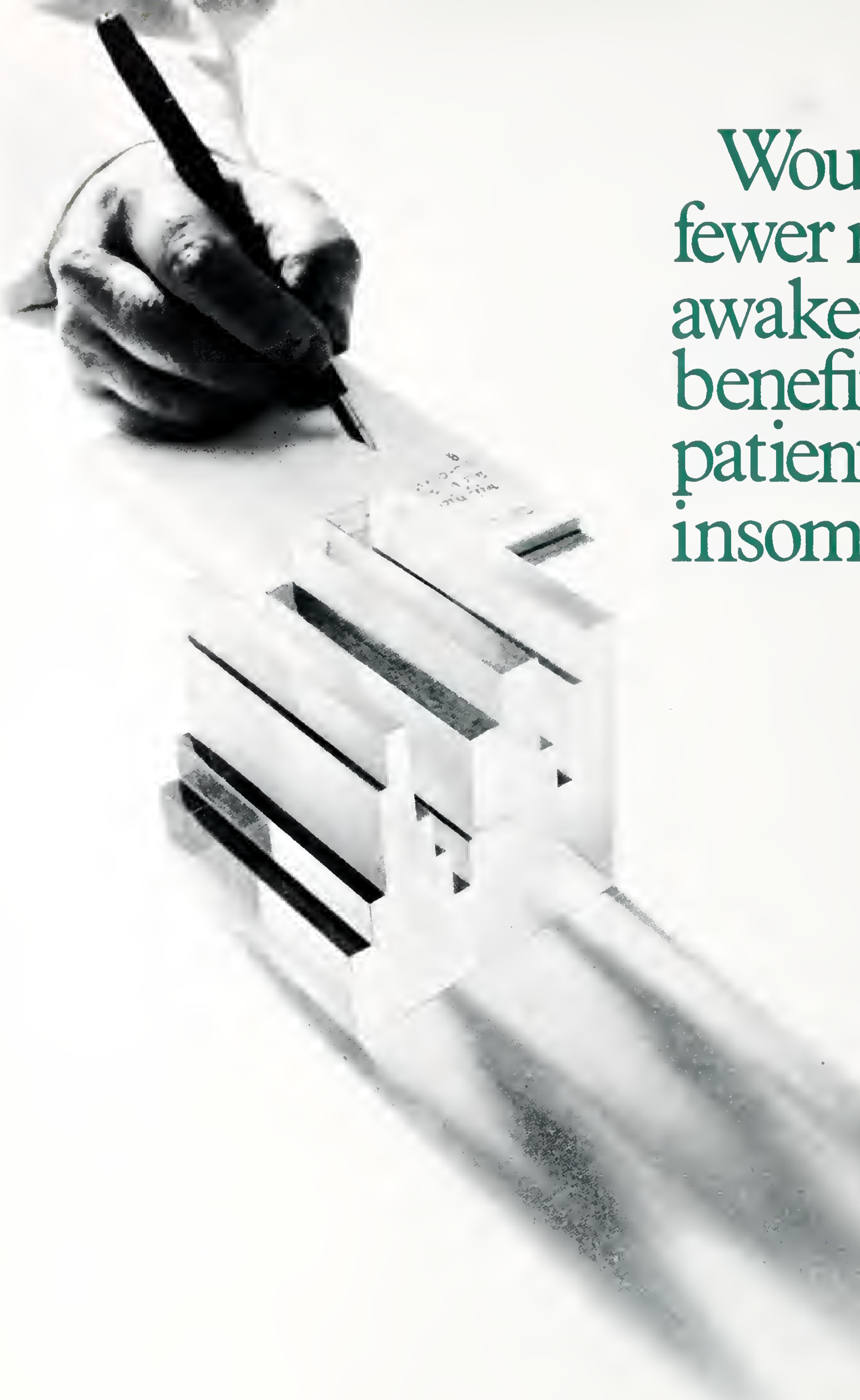

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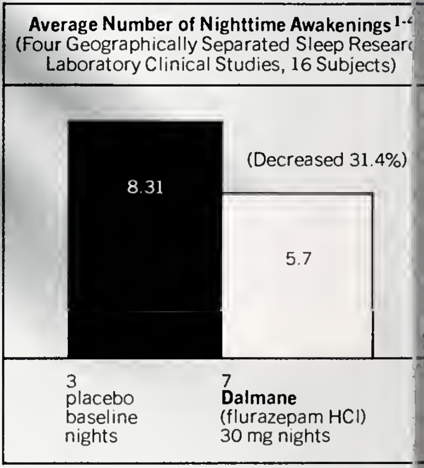

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...and is well tolerated. The usual adult dosage is 30 mg *h.s.*, but with elderly and debilitated patients, limit the initial dose to 15 mg to preclude oversedation, dizziness or ataxia. Evaluation of possible risks is advised before prescribing.

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1. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971
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3. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
4. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
5. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

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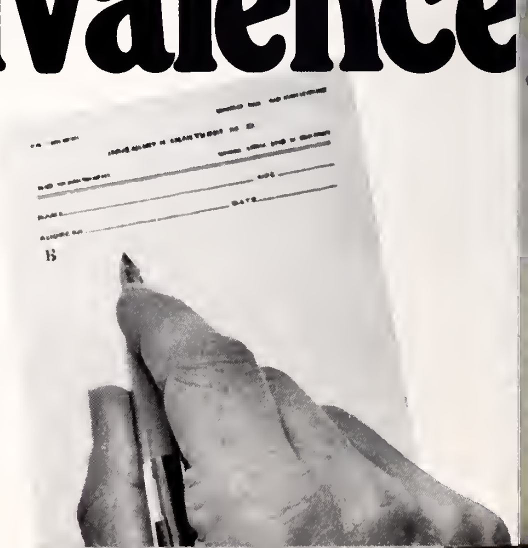
Bioequivalence



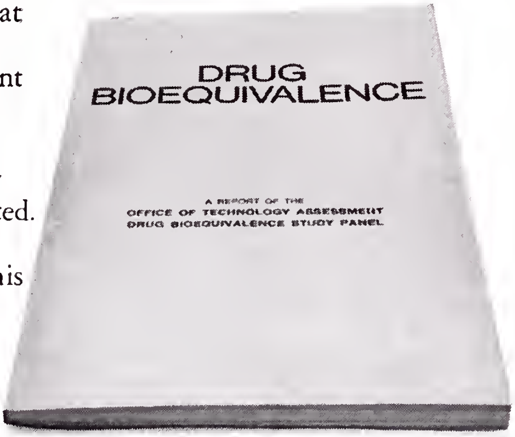
the weight of scientific opinion:

If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that product's safety and effectiveness simply because the chemical content was the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalency in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.


DRUG
BIOEQUIVALENCE
A REPORT OF THE
OFFICE OF TECHNOLOGY ASSESSMENT
DRUG BIOEQUIVALENCE STUDY PANEL

"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and (b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or (c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...

P·M·A

Pharmaceutical Manufacturers
Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

protecting the integrity of your prescription

which may be encountered. Failure to do so leads invariably to recriminations.

5. *The Consultation Process.* Today, a "consult" is ordered on the chart; transmitted by messengers or clerks; and the patient may miss the impressive and often reassuring dialogue that now rarely takes place in his presence. Can we not restudy the process so that the full benefit of the combined opinions can be demonstrated to the patient?

6. *Family Contact.* Frequently hospital personnel are asked to find out how a patient is progressing. The query often comes from a close relative who insists "the doctor will not talk to me; he can't be reached." Cannot a person be selected to whom the physician will respond, or better yet, keep informed even at extra effort?

7. *Gratuitous "Criticism."* Commiserating with the patient by saying "what can we expect these days in this hospital" when the 11 a.m. medication hasn't been given by noon will add another dimension to the suit-conscious individual's thoughts. Corrective measures should indeed be taken — but there must be more "appropriate" channels!

8. *Punctuality.* Not uncommonly, the physician keeps patients waiting — both in clinics and on rounds. It must be recognized — particularly as third party payment makes the patient better able to meet "reasonable charges" — that the patient weighs his "waiting time" against the physician's.

9. *Insurance "Billing Practices."* Physicians who look askance at "paper work" — and let that interfere with the rights and benefits that a patient expects to receive — will also find themselves the target of bitterness. It would help everyone if they became familiar with, and attempted to explain, costs which we ourselves recognize to be shockingly high. "Cash on the line" is no longer an appropriate demand — with some exceptions, of course — if the person has a recognized credit device.

Many of the provocative and challenging circumstances described cannot be prevented or ameliorated overnight. I sincerely believe that a point-by-point exploration could help materially in restoring the prestige and credibility which the medical profession rightfully deserves.

(Continued on page 298)

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Positive Steps for Plastic Surgeons

By Kenneth R. Dorner, MD, FACS
Kalamazoo

There are positive things plastic surgeons can do to reduce malpractice suits.

The plastic surgeon needs to be astute in appraising patients. He needs to be certain that the patient has a realistic understanding of the problem, of what can be achieved and of what the consequences of the surgery are. An example of a poor surgical candidate is a patient who repeatedly asks the physician how much scarring will result and whether or not, in fact, there will be any scarring when the patient already has been carefully and realistically informed.

Patients with obvious severe psychiatric conditions in general are best not operated on, and the markedly paranoid patient may be difficult to spot. Sometimes a severely paranoid patient is a male who requests nasal surgery for change of the nasal shape but who has not had any previous injury to account for the deformity.

Another type patient who often has a poor plastic surgical result is the patient who comes for a consultation regarding a "generalized facial evaluation." These patients often have very poor motivation toward any type of surgery and are frequently unhappy with the results since they do not have a realistic grasp of any actual physical deformity. Patients who make the best plastic surgical candidates and who have the best results regarding facial deformities are those who have a clear understanding of their deformity and request strongly that the surgery be performed.

An unsatisfied patient may result when the plastic surgeon attempts to convince the patient that some other surgical procedure should be done rather than the requested procedure. This frequently leads to an unhappy, dissatisfied patient who comments, "He talked me into the surgery, and I didn't want it done."

Patients need clarification of misconceptions regarding plastic surgery. Many patients believe that coming to a plastic surgeon will result in their having no scars. Patients must understand the best the plastic surgeon can do is minimize scars. Patients frequently also believe that skin grafts do not leave any deformities. Patients need to be informed that skin grafts always leave scars, the color match is never exactly the same and no hair grows in skin grafts.

Do not abandon patients when complications occur. It is at this time that the patient frequently needs the greatest amount of help. Seeing him frequently makes him realize he has not been abandoned and that the complications will gradually be alleviated. Be willing to talk to the patient to understand his fears and worries. Try to anticipate some of the natural outcomes of surgery and inform the patient. A patient informed of what may come will usually accept it in good faith; but when consequences occur which come as surprises, he may become anxious and fearful, then uncertain and hostile. A plastic surgeon needs to be honest and realistic with his patients. Tell them there will be scarring. Tell them there will be swelling; that black and blueness will occur and that they may have some discomfort. Give them realistic ideas of chances for improvement.

The average adult needs to know that following nerve repairs in the hand or finger he will get some return of normal sensation but may never have a complete return, and in like manner a tendon graft may not give the patient completely full range of motion. A good concept to remember regarding the hand is that any injury results in a reduced level of performance, function and efficiency, be it every so slight a reduction. Patients need this understanding.

Lastly, it need not be said, but good records are important. Records frequently dictated in the office with the patient present give him an opportunity to rehear what he has told you and to make corrections if necessary. They act as a good implantation in his mind as to what has been discussed. Photographs can immeasurably augment the record and patients frequently are impressed in looking at their pre- and post-op photographs as to how much change actually has taken place. On the other hand, it is important not to show photographs of other patients as this frequently gives a patient a visual preconceived idea as to how he may appear and often results in patient dissatisfaction.

Doctor Dorner is president, Michigan Academy of Plastic Surgeons.

Communications the Key

By John C. Bay
Traverse City

The issues, as I see them, are two-fold: One, a public that expects too much from medicine and physicians; and two, a lack of communication between doctors, patients, and hospitals through which basic trust and understanding of the patient and the patient's family can be developed.

Doctors spend far too little time talking to patients and/or their families in an attempt to establish a relationship of trust and confidence between both parties and to prepare them for the possibility of an imperfect result. Informed consent is an effort to force doctors to discuss patient problems fully with the patients and their families prior to occurrence. However, the rapport of the family and the patient and the old family physician is missing; and, I believe, that this is one of the largest contributors to increasing proclivity on the part of the patient to sue the doctor for an imperfect result. Only a very few malpractice actions are a result of negligence or professional and technical incompetence. Most result because communications have broken down between patient, family, and doctor.

This is also true for hospitals and staffs. All too often we are on the defensive whenever a patient complains or brings a real problem to us; and we are unwilling to talk to the patient with complete honesty and frankness. It is my premise that if we are honest and open with the patient and try to answer all his questions, 99 out of 100 times litigation will be avoided.

Also, we must re-educate the public that medicine, at its best, is an imperfect science and cannot always affect a cure. When the time comes that the patients know the doctors and the hospitals have done everything humanly possible for them and have treated them with dignity and respect, then they, the patients, will be more willing to accept the imperfect result; and the number of claims will be reduced measurably.

Mr. Bay is executive vice president, Munson Medical Center, Traverse City, and is a board member, Michigan Hospital Association.

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(Continued on page 302)

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Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

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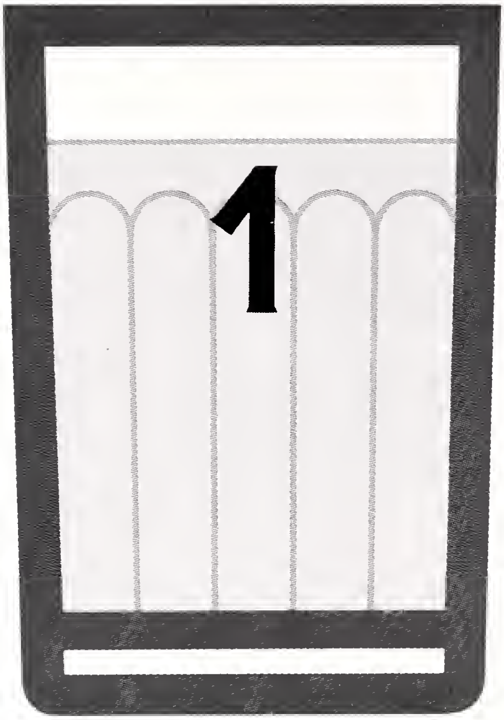

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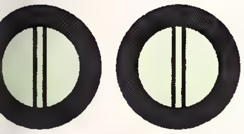

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Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis, and cystitis) due to susceptible organisms. ***Note:* Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials, including sulfonamides, especially in chronic or recurrent urinary tract infections.** Measure sulfonamide blood levels as variations may occur; 20 mg/ 100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/ 20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/ 24 hrs.

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Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of perso allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PM

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Letters

'Perinatal Tips'

To the editor,

It is a pleasure to see the section "Perinatal Tips" return to *Michigan Medicine* as a vehicle to keep Michigan physicians abreast of current concepts in perinatal medicine.

To that end, I think a number of comments relative to the case of pre-maturity with neonatal sepsis that is described in the March issue are appropriate.

1. Case descriptions of infants should at all times include Apgar scoring as an index in a quantitative sense to the adaptation of the infant to the birth process.
2. The statement as to clinical assessment of gestational age and as to whether the child was appropriate or inappropriate for gestational age with respect to size should also be included in initial description of the infant.
3. A calcium level of 7.8 at 24 hours of age is certainly not sufficient to diagnose hypocalcemia as a cause of tremors at that age. (Mean calcium level at 12 to 24 hours among normal term infants is 7.8 — Schaffer & Avery Textbook) Certainly evaluation of the serum phosphorus would be apropos but as was pointed out the case represents diagnostic underevaluation at that period.
4. It was implied that this child was fed orally and considering that suck-swallow coordination frequently is not adequate at 33 to 34 weeks gestation, the description that the child tired was certainly expected. Initiation of feedings by gavage feeding would have been a more appropriate approach to the initial feeding of the child.
5. The onset of apneic spells at three days of age certainly is another ominous sign. Their treatment with oxygen in an isolette "relieved satisfactorily" the symptom but was not at all helpful in the consideration of etiology. Oxygen as treatment for apneic episodes is not benign with respect to the infant retina and demands that arterial oxygen be monitored.
6. Recognition of sepsis at four days of age when the child was showing tremors, convulsions, jaundice, lethargy, and apnea places the diagnostic evaluation much, much too late in a child who presented indication for complete septic evaluation on at least the second day of life.
7. Treatment for neonatal sepsis with a single antibiotic when the organism is unknown is not sufficient therapy. Group B Beta Hemolytic Streptococcus and E. Coli continue to be the most prevalent organisms in neonatal sepsis and meningitis. To adequately cover just this combination statistically requires that a penicillin type drug, either Ampicillin or Aqueous penicillin, and an amino glycoside, either Kanamycin or Gentamycin, are required for adequate coverage. Although it is doubtful that 400 mg per kilogram per day of Ampicillin would do serious harm to the neonate, there is no evidence that doses of this magnitude are necessary in the neonatal period for the treatment of either sepsis or meningitis.
8. The sequence of events described by this case describe and prescribe an urgent need for a reciprocal communication between all primary hospitals offering perinatal care and the regional intensive care resources where the uncommon severely ill mother or baby is more frequently treated. By today's standards, many "small hospitals" lack the sufficient personnel, equipment, laboratory, and x-ray facilities not to mention the experience to handle a problem as it is described in this case.

Certainly in a short feature section of the journal such an exhaustive description of the infant's course would have expanded greatly the length of the article. Nevertheless, it seems to me that the prime "tip" coming from the case is to encourage all doctors and hospitals to maintain a reciprocal, educational, and at times consultative relationship with the regional perinatal centers being established in Michigan so that cases such as this one can be treated early and so that those people dealing with perinatal medicine in the primary care situation are kept abreast of the warning signs of perinatal illness.

One again I congratulate you on the effort required to prepare this feature section and welcome its return to *Michigan Medicine.*

Sincerely,
John V. Hartline, M.D.
Neonatologist

Doctor Zavell Replies

Dear Doctor Hartline,

Thank you for your letter and comments concerning "Perinatal Tips." Your points are well taken and I am in agreement with them, particularly your conclusion. As the author of "Perinatal Tips" since its inception in June, 1970, it is heartening and encouraging to me to realize that other doctors do read this article. Hopefully, my efforts have been of some use in the past to obstetricians, pediatricians, GPs, neonatologists, pediatric surgeons, etc.

I should like to point out, however, several things. First, my intent has been and still is, to present a short yet educational article, hopefully, for the most part, limited to one page. Experience has taught me that busy doctors will more likely read and digest a short article with only a few points rather than one running a number of pages in length or one going into too much detail. Second, we have on several occasions in the past urged referral of problem cases to NICUs. We shall continue to so urge. Finally, the lack of statements concerning Apgar scoring and clinical assessment of gestational age is an oversight on my part in this March article. However, not infrequently, one or the other or both are not available to me from my original sources of information.

Sincerely,
Paul M. Zavell, MD

Program of Care Recommended for Children Who Underwent Radiation

To the editor,

There has been a considerable amount of information in the media recently about the occurrence of thyroid carcinoma in individuals who were treated with radiation therapy to the chest, head, or neck during their infancy or childhood. At the time that the treatments were given this was fairly common practice and was considered to be beneficial for the conditions treated.

Reports in the medical literature vary as to the incidence of thyroid carcinoma in those so treated. There appears to be a relationship between the technique of irradiation used and the subsequent incidence of thyroid carcinoma. The total dose given, the volume of tissue treated and the nearness to the thyroid gland are elements of the technique which are important.

The members of the Board of Directors of the Michigan Society of Therapeutic Radiologists would like to make the following recommendations for patients who have a history of radiation therapy during infancy or childhood:

1. Annual history and physical examination with attention to palpation of the thyroid gland.
2. If palpable abnormalities are found, a thyroid uptake and scan.
3. Tests for thyroid function if indicated.
4. Treatment for any abnormalities found.

We are urging our members to cooperate in making records available from their treatment centers to the physician caring for such patients. Our members may also be able to help the physicians in their evaluation of these patients.

Sincerely yours,
Delmar Mahrt, M.D.
Juan Fayos, M.D.
Murray Boles, M.D.
Eugene Kopple, D.O.
Joel White, M.D.
Michigan Society of Therapeutic Radiologists

More on Radiation

To the editor,

The following is the official position of the Executive Committee of the Michigan Radiological Society on the possible relationship of thyroid malignancy to previous X-Ray therapy in children for lesions of the head, neck, and upper chest. A copy of this position also was sent to each member of the Society:

Low dose radiation therapy to the head, neck, and chest areas for benign conditions encountered in infants and children was a common and effective method of treatment for many years. Recent studies have indicated a probable association between the therapy and subsequent development of thyroid abnormalities some of which are malignancies. The Michigan Radiological Society strongly recommends its members make this information available to all such patients whom it is possible to contact. They should be advised of the possible risk and strongly urged to see their physician for an examination of the thyroid gland with provision for follow up study as indicated.

Sincerely,
Francis P. Shea, M.D.
Secretary-Treasurer
Michigan Radiological Society

Dal Santo Article Useful

To the editor,

Re: Michigan Medicine, March, 1975, "Absorptive Capacity, etc., " G. Dal Santo, M.D.

Good article, brief, useful, to the point and authoritative*, others should be so.

R. W. Augustine, MD, Orthopedist
Detroit

*Great use for local anesthesia in emergency surgery with full stomach with or without alcoholism.

(Continued on page 310)

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'Be Sure of Theories'

To the editor,

I would like to commend Dr. Robert A. Hockelman for his recent letter to the editor, February 1975. His views on Dr. Kadlub's theory of crib death are shared by many. We lost our seven week old son just nine months ago from Crib Death. Since this time we have organized the only Guild in Michigan. The International Guild for Infant Survival is a non-profit, tax-exempt, educational organization. The anxiety that this article by Dr. Kadlub has placed on bereaved families is just unbelievable. The personal contact and counseling I, myself, have done, has made me see what damage it can do. The Oakland County Visiting Nurses have had many instances of mothers staying up all night to burp their babies. A bereaved family has enough guilt feelings without adding if they had only burped their baby it would be alive. Also, what about proven statistics such as ages of these babies, the time of the year these deaths occur, and the fact that it affects more males than females. Does this have any bearing on Dr. Kadlub's theory?

As a crib death parent, a counselor, and a human being, I am pleading to doctors to be sure of your theories before adding confusion and additional heartache. Our motto for our Guild states "To Keep Each New Life Living," also, let us help each bereaved family make life go on.

Sincerely,

Jim and Sandy Whitlow
The International Guild for Infant Survival, Inc.

State Board Standards

To the editor,

I read in your *Medigram*, Vol. 74, No. 5, Feb. 14, 1975, the statement adopted for the Michigan Medical Practice Board about minimal standards in reference to record keeping. Now because of a difference of opinion with Medicaid, I would like to know what the board considers the minimal standards in the reading of EKGs on his own patients. I am not concerned with the doctor who reads EKGs for other doctors' patients. Thanking you in advance for your help in this matter.

Sincerely,

Mario Cote
Highland Park

(Editor's Note: The Michigan Medical Practice Board is now just in the process of establishing official policy on specific procedures. Formulating official policy will, of course, take some time. But as it progresses, the Board will be publishing its established policies.)

Insect Bite Data Sought

To the editor,

Again, this year I am compiling a Biting Insect Summary and would appreciate any case reports of unusual allergic reactions to biting insects, i.e., mosquitoes, fleas, gnats, kissing bugs, bedbugs, chiggers, black flies, horseflies, sandflies, deerflies, etc.

I would like physicians to supply me with case reports of those patients who have had unusual reactions to such insects. Include in your reports, the type of reactions and complications, if any, the age, sex, and race of the patient, the site of the bite(s), the season of the year, the immediate symptoms, the skin test results, desensitization results, if any, and any associated other allergies. Send this information to the following address —

Sincerely,
Claude A. Frazier, M.D.
4-C Doctors Park
Asheville, N.C. 28801

New Drugs and Malpractice

To the editor,

Lack of statistical data from the insurance carriers is our greatest obstacle in coping with the menace of malpractice litigation. Certainly their platitudinous advice to maintain our patients' confidence and trust is totally inadquate.

A considerable proportion of malpractice suits is based on the untoward effects of drugs, where both the prescribing physician and the manufacturer are defendants. It would seem only fair for the drug manufacturer to shoulder the entire burden of defense in such cases. This could also provide a new and useful role for the detail man. When he next asks you to try his company's new drug, which though not curative, "is better than the similar products you have used"; then you must answer him: "Teach me how and when to use it, and give me a certificate of competence backed by your company's binding legal guarantee to shoulder full responsibility for any misadventure resulting from your drug, and only then will I consider prescribing your product!"

Indeed with the new law permitting generic substitutions, I might even write D.A.W. (dispense as written) for those manufacturers who will offer me this peace of mind.

Sincerely,
Sam I. Lerman, M.D.
Department of Family Medicine
Wayne State University

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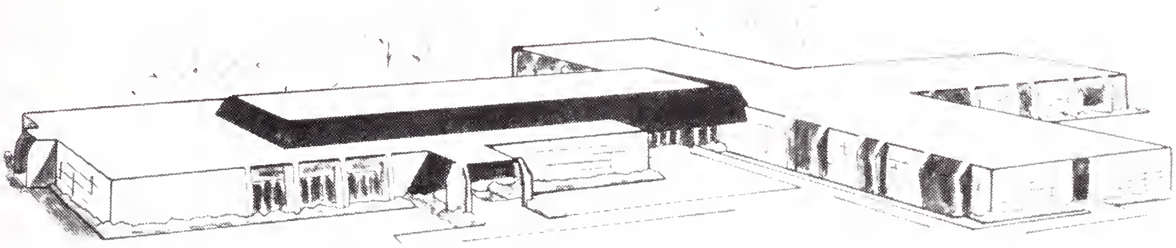

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PURDUE DEFIBRILLATION CONFERENCE: The Biomedical Engineering Center of Purdue University will hold a conference in Lafayette, Indiana from October 1 to 3, 1975 covering the practical and clinical aspects of cardiac defibrillation. The speakers have been selected based upon their positions as leaders in their respective fields. The topics to be discussed include clinical, basic science, and engineering aspects of electrical defibrillation as it pertains to the needs of physicians, nurses, emergency medical personnel, hospital engineers, equipment manufacturers, and research scientists. The state-of-the art of defibrillation techniques will be presented and examined critically and a major goal of this three-day conference will be to integrate all available technology for optimization of ventricular defibrillation. The registration fee of $95.00 includes proceedings and two luncheons. For further information, please contact: Division of Conferences and Continuation Services, Stewart Center, Purdue University, West Lafayette, Indiana 47907. Phone: (317) 749-2533.

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ARNOLD H. KAMBLY, M.D.
Psychiatrist-Director

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In Memoriam

Frederick P. Brender, MD
Saginaw

Frederick Paul Brender, MD, Saginaw family physician, died Nov. 7 at the age of 72. Doctor Brender was a graduate of the University of Michigan Medical School and was affiliated with St. Mary's, St. Luke's, and Saginaw General hospitals. He was former chairman of the Saginaw County Medical Society's Public Health Committee.

Joseph R. Cipparone, MD
Lansing

Lansing pathologist Joseph Robert Cipparone, MD, died March 10 at the age of 46. He had been active with the MSMS Maternal Health Committee and was former chairman of the Ingham County Medical Society Public Relations Committee. Doctor Cipparone was a graduate of Marquette University medical school and was affiliated with St. Lawrence Hospital, Lansing.

Hugh K. Cook, MD
Bay City

Hugh Kenneth Cook, MD, Bay City ophthalmologist and otorhinolaryngologist, died Feb. 14 at the age of 55. Doctor Cook was a graduate of the University of Michigan Medical School and was past president of the Saginaw Valley Academy of Ophthalmology and Otolaryngology. He was a member of the Michigan Triological Society, the American Academy of Otolaryngology and the Saginaw Valley EENT Society.

Edward I. Mintz, MD
Detroit

Edward Ira Mintz, MD, Detroit, died in April at the age of 70. Doctor Mintz was a graduate of the University of Michigan Medical School and was a board-certified obstetrician-gynecologist. He was a fellow of the American College of Surgeons and a member of the Michigan Ob-Gyn Society, and the Central Society of Obstetricians and Gynecologists.

Wesley P. Moore, MD
Detroit

Detroit psychiatrist Wesley Pelham Moore, MD, died March 14 at the age of 53. He was a graduate of Howard University medical school and was affiliated with Henry Ford and Wayne County General hospitals. He previously had been a family physician in Flint for 17 years.

Herman M. Plavnick, MD
Detroit

Herman M. Plavnick, MD, graduate of the Detroit College of Medicine and Surgery, died Jan. 16 at the age of 69. Doctor Plavnick was a family physician and was affiliated with Grace and Brent General hospitals in Detroit.

Chester J. Richards, MD
Clearwater, Fla.

Former Shiawassee County physician Chester James Richards, MD, died Dec. 10, 1974 at the age of 78. Doctor Richards was a graduate of Detroit College of Medicine and Surgery and had been affiliated with Durand Community and Owosso Memorial hospitals. He was past president of the Shiawassee County Medical Society.

Robert Ross Turner, MD
Detroit

Detroit-area obstetrician-gynecologist Robert Ross Turner, MD, died April 9 at the age of 47. Doctor Turner was a graduate of the University of Western Ontario and had served with the Royal Canadian Air Force. He was affiliated with Oakwood Hospital, Dearborn, and Women's and Receiving hospitals of Detroit.

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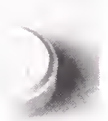
For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.



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President's Page

No Piecemeal Approach Will Solve Professional Liability Problem

The following remarks are taken from Doctor Brush's inaugural speech before the 1975 MSMS House of Delegates' Annual Session.

It is with pride and humility that I accept the great honor of becoming the 110th president of the Michigan State Medical Society. I also have a great deal of concern — because I see many clouds around us and very little sunshine.

I can foresee that a good part of my year will be spent on professional liability problems. It surely will continue as the No. 1 MSMS priority. But I am an optimist. I feel that during the coming year we will find solutions. I believe improvements and regulations in both the legal and medical professions will be made, so that the public will be better served by each of us.

This problem exists nowhere in the world but the USA. The causes are legal, social and cultural. Our courtrooms are filled with emotionalism and have been attempting to adjudicate complex medical problems without any knowledge or background in this area. Windfall payments and unrealistic judgments have been common — judgments for omission as well as commission.

Our MSMS action program to resolve the professional liability situation is before the legislature. MSMS has many friends in the state legislature. Many of them are pushing along our legislative package. We must insist that all the major bills supported by MSMS are adopted, rather than only the minor bills that really provide no meaningful solutions.

Our friends in the Physicians Crisis Committee have provided valuable contributions, especially in the area of contractual and binding arbitration.

MSMS, through its *Medigram*, *Journal* and monthly packets, is keeping all members informed and current on all new developments. This requires a great deal of work. And yet, would you believe that some doctors ask me almost every day, "What is MSMS doing about the malpractice mess?"

Let me assure you that even though our MSMS program of work has been launched, we need an all-out effort from every member so we can succeed. We also need the support of every doctor's spouse and the patients. And we must continue to inform and urge the general public to insist on legislative action now.

We do not want a piecemeal approach.

We do not want a temporary solution.

We do not want any band-aid bills. The problem as a whole must be attacked and solved.

I want to assure each and every one of you of my total commitment to this office. I invite you to tell me about your complaints and your suggestions. Let me hear from you.

We can — and must — work together to effectively serve the medical profession and the public.

Brock E. Brush, MD
MSMS President

With this issue, new MSMS President Brock E. Brush, MD, Detroit, begins his President's Page messages. Doctor Brush is chief of general surgery, Division I, at Henry Ford Hospital where he has been a staff member since 1938. He is former MSMS Council vice chairman, chairman of the MSMS Medical Education Liaison Committee, MSMS Public Relations Committee chairman and is a long-time Wayne County Medical Society delegate to MSMS. He is active in civic affairs and past president of the American Geriatric Society, the Michigan Cancer Foundation, Wayne County Medical Society, Detroit Academy of Medicine, Detroit Academy of Surgery and Detroit Surgical Association.

The 1975 MSMS Annual Session

The silver mantle — engraved with the names of each of the MSMS presidents through the years — passed during the 1975 MSMS House of Delegates meeting May 4-6 from Brooker L. Masters, MD, right, in photo at left, to Brock E. Brush, MD, and then provided the occasion for MSMS Past President C. Allen Payne, MD, far right, to point out his own name in the list of MSMS leaders.

A high point of the proceedings came when Robert M. Leitch, MD, former MSMS Council chairman, was named MSMS president-elect, and took the podium for his acceptance address.

Michigan physicians who were graduated from medical school 50 years ago were honored at the MSMS Annual Session. One of them was Abraham M. Bookstein, MD, Ferndale, above, who received a red corsage from MSMS staff member Sherry L. Decker.

While the House of Delegates was in session, both Detroit papers carried large advertisements asking public aid and support of MSMS programs to alleviate the professional liability insurance problem. The Detroit Free Press ad was studied by MSMS delegate Thomas M. Flake, MD, Detroit.

Oliver McGillicuddy, MD, past MSMS president and a 1975 recipient of the MSMS 50-year award, took the podium during the MSMS House proceedings to remind the delegates of the changes in the medical profession over the last 50 years, and to urge them to continue their tradition of service to hamanity.

Frequent visitors at the 1975 MSMS House of Delegates meeting were the news media, as the doctors' deliberations made news. Among those interviewed were MSMS President Brock E. Brush, MD, and President-elect Robert M. Leitch, MD, top left; Immediate Past President Brooker L. Masters, MD, lower left, and Chairman of the MSMS insurance program task force Frank B. Walker, II, MD, lower right. In the other scenes, the registration area and delegates themselves provided background for taped news segments.

On Monday noon, the annual MDPAC Congressional Luncheon featured Marvin Esch, center, Michigan Republican congressman, second district, and William E. Brodhead, Democratic congressman, 17th district, (not shown) as speakers. They were greeted by Thomas R. Berglund, MD, left, MDPAC chairman. The Michigan PAC received a membership award during the luncheon from William Cooper, MD, Washington, D.C., right, AMPAC board of directors.

The MSMS delegates approved a physician-owned mutual liability insurance company, approved a uniform claim form and single coding system, and voted unanimously against any work stoppage to dramatize the professional liability insurance problem. The delegates included medical students, the dean of the MSU medical school and MDs from every region of the state.

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Warnings: Estrogen therapy should not be given to women with recurrent chronic mastitis or abnormal mammograms except, if in the opinion of the physician, it is warranted despite the possibility of aggravation of the mastitis or stimulation of undiagnosed estrogen-dependent neoplasia.

The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, retinal thrombosis, cerebral embolism and pulmonary embolism). If these occur or are suspected, estrogen therapy should be discontinued immediately.

Estrogens may be excreted in the mother's milk and an estrogenic effect upon the infant has been described. The long range effect on the nursing infant cannot be determined at this time.

Hypercalcemia may occur in as many as 15 percent of breast cancer patients with metastases, and this usually indicates progression of bone metastases. This occurrence depends neither on dose nor on immobilization. In the presence of progression of the cancer or hypercalcemia, estrogen administration should be stopped.

A statistically significant association has been reported between maternal ingestion of diethylstilbestrol during pregnancy and the occurrence of vaginal carcinoma in the offspring. This occurred with the use of diethylstilbestrol for the treatment of threatened abortion or high risk pregnancies. Whether or not such an association is applicable to all estrogens is not known at this time. In view of this finding, however, the use of any estrogen in pregnancy is not recommended.

Failure to control abnormal uterine bleeding or unexpected recurrence is an indication for curettage.
Precautions: As with all short acting estrogens, the following precautions should be observed:

A complete pretreatment physical examination should be performed with special reference to pelvic and breast examinations.

To avoid prolonged stimulation of the endometrium and breasts in climacteric or hypogonadal women, estrogens should be administered cyclically (3 week regimen with 1 week rest period—withdrawal bleeding may occur during rest period).

Because of individual variation in endogenous estrogen production, relative overdosage may occur which could cause undesirable effects such as abnormal or excessive uterine bleeding, mastodynia and edema.

Because of salt and water retention associated with estrogenic anabolic activity, estrogens should be used with caution in patients with epilepsy, migraine, asthma, cardiac, or renal disease.

If unexplained or excessive vaginal bleeding should occur, reexamination should be made for organic pathology.

Pre-existing uterine fibromyomata may increase in size while using estrogens; therefore, patients should be examined at regular intervals while receiving estrogenic therapy.

The pathologist should be advised of estrogen therapy when relevant specimens are submitted.

Because of their effects on epiphyseal closure, estrogens should be used judiciously in young patients in whom bone growth is incomplete.

Prolonged high dosages of estrogens will inhibit anterior pituitary functions. This should be borne in mind when treating patients in whom fertility is desired.

The age of the patient constitutes no absolute limiting factor, although treatment with estrogens may mask the onset of the climacteric.

Certain liver and endocrine function tests may be affected by exogenous estrogen administration. If test results are abnormal in a patient taking estrogen, they should be repeated after estrogen has been withdrawn for one cycle.
Adverse Reactions: The following adverse reactions have been reported associated with short acting estrogen administration:
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Gaucher's Disease:
Observations on its Clinical Course

By James Gruenberg, MD
Detroit
John A. Penner, MD
Ann Arbor

Synopsis-Abstract

The natural history of Gaucher's disease and the clinical parameters of its management and therapy are discussed in relation to 16 patients followed at the University of Michigan Medical Center and Wayne County General Hospital. Of interest in this study were findings of normal chromosome patterns, a 100-fold increase in spleen glucocerebrosides, a decrease in acid phosphatase activity following splenectomy and evidence of disease in an American Indian.

Nothwithstanding the present lack of definitive therapy, early splenectomy in a symptomatic individual seems warranted.

An adult who has survived the potentially life-threatening complication of thrombocytopenia, usually with the aid of splenectomy, has a reasonably good prognosis.

Introduction

Since initially described in 1882,[1] the symptom complex known as Gaucher's disease has presented a unique pattern of clinical manifestations consistent with the striking and distinctive appearance of the Gaucher cell. At present, the characteristic complications of the disease have been recorded in over 350 cases, consisting primarily of patients over age 10, Caucasian and often of Jewish extraction[2,3,4] Despite such extensive reporting, the prognosis for the disorder remains obscure. Certainly modern surgical techniques and the advent of antibiotics have potentially obviated the life-threatening complications of hypersplenism, intercurrent infection, and resulting cachexia, all former well-recognized modes of demise. To further define the course of this disease, the collected experience (16 patients) of the University of Michigan Medical Center (UMMC) and the Wayne County General Hospital (WCGH) is presented and discussed from a clinical and therapeutic viewpoint.

Methods

Chromosome studies were obtained by culturing blood leukocytes as described by Morhead and Nowell;[5][*] cerebrosides were separated from spleen as described by Radin et al.[6][**] Standard laboratory procedures were employed to secure hematological data. Acid phosphatase was determined by methods employing p-nitrophenyl phosphate as a substrate[7] (sigma units) or phenyl phosphate[8] (King-Armstrong units).

Summary of Case Studies

Presentation and diagnosis (Table I):

Hemorrhage was the significant initial problem in six patients (cases 2, 3, 4, 5, 9, 10). Seven patients presented with other manifestations of Gaucher's disease, which included asymptomatic splenomegaly (cases 1, 5, 12), anemia (case 15), sciatica (case 14) and osseous disease (cases 13, 16). The other three patients were diagnosed incidentally (cases 7, 8, 11).

Heredity

The fourteen families, in which sibling status is known, contain 54 offspring of which 19 are known to have Gaucher's disease and 2 have asymptomatic splenomegaly and are presumed affected. One son is believed to be affected and a niece is known to have the disorder; all other offspring are normal. Consanguinity is known in only one family. Five families are Jewish; another is American Indian, the rest are of European ancestry, although one of these also is of American Indian extraction.

Clinical and laboratory findings (Table II):

Hematologic: Splenomegaly developed in all 16 patients, but was not present initially in three (cases 7, 8, 15). Pancytopenia was observed in 13 patients; however, all 16 exhibited thrombocytopenia to a variable degree usually in association with a mild normocytic normochromic anemia. Hemolysis was documented in one patient (case 9), and presumably was at least partially

---

Doctor Penner is with the Department of Internal Medicine (Simpson Memorial Institute), University of Michigan Medical Center. Doctor Gruenberg is with First Surgical Division, Department of Surgery, Henry Ford Hospital, Detroit, MI 48202.

[*] Studies kindly provided by Dr. Herbert Spencer, UMMC and Veterans Administration Hospital, Ann Arbor, Michigan.

[**] Data made available by Drs. Gregory Duboff (Simpson Institute) and Norman Radin, UMMC.

Table I

Case	Age	Diagnosis	Presentation	Splenectomy after diagnosis	Age	Present Status	Siblings
#1 A.D.	4	Marrow	Hepatosplenomegaly	No	15	Hepatosplenomegaly Variable Thrombocytopenia	2 normal
#2 J.G.	7	Marrow	Epistaxis Splenomegaly Thrombocytopenia	8 yrs.	24	Intermittent Arthralgia	1 affected twin sister 2 normal
#3 B.H.	25	Spleen	Hemorrhage Hepatosplenomegaly Pancytopenia	8 mos.	28	Asymptomatic	1 splenomegaly 3 normal
#4 D.J.	19	Liver biopsy	Menorrhagia Hepatosplenomegaly Pancytopenia	2 yrs.	22	Mild anemia	5 normal
#5 L.J.	2	Marrow	Hepatosplenomegaly Pancytopenia	1 mo.	2	Death Meningitis	5 normal
#6 D. Ju.	3	Marrow	Purpura Hepatosplenomegaly Pancytopenia	4 yrs.	9	Death Hepatic Dysfunction Thrombocytopenia	3 normal
#7 L.K.	76	Spleen	Intestinal Obstruction Thrombocytopenia	Before diag.	77	Death Carcinoma Pulmonary Embolism	1 normal (affected niece)
#8 G.M.	51	Lymph Node	Septicemia Anemia Leukopenia	No	51	Death Septicemia	2 normal
#9 M.S.	30	Marrow	Purpura Hepatosplenomegaly Pancytopenia	7 mos.	30	Asymptomatic	1 normal
#10 L.S.	12	Marrow	Systemic Illness Hemorrhage Hepatosplenomegaly Pancytopenia	1 mo.	19	Death Renal Disease	3 affected 1 normal (see case 11)
#11 T.S.	20	Marrow Liver	"flu-syndrome" Splenomegaly Pancytopenia	9 yrs.	30	Asymptomatic Mild Anemia	3 affected 1 normal (see case 10)
#12 D.S.	34	Spleen	Splenomegaly Pancytopenia	9 mos.	48	Death Cerebral Vascular Accident	1 splenomegaly
#13 A.U.	17	Bone Sequestra	"Ostemyelitis" Hepatosplenomegaly Pancytopenia	No	27	Death Pulmonary Edema Subdural Hematoma Pancytopenia	6 normal 2 deceased 1 affected (see case 14)

#14 F.Y.	23	Marrow	Sciatica Hepatosplenomegaly Pancytopenia	8 mos.	45	Amputation Osseous Symptoms Anemia	6 normal 2 deceased 1 affected (see case 13)
#15 G.Z.	31	Marrow	Anemia Thrombocytopenia	9 mos.	31	Asymptomatic	3 normal (affected son)
#16 S.B.	12	Marrow	Osseous Abnormalities Splenomegaly Pancytopenia	22 yrs.	34	Hip Prosthesis Walking cast	none

responsible for the anemia in the others. As indicated by the patient's past history and presenting symptomatology, morbidity appeared unrelated to the degree of splenomegaly.

In the immediate postoperative period, all 13 patients developed a leukocytosis, a thrombocytosis frequently exceeding one million and an increase in hemoglobin. Values obtained from one to 22 years after operation revealed a moderate thrombocytopenia in only one patient (case 6) who had severe liver disease. A mild anemia persisted in eight patients, six developed or continued to have leukocytosis, and three a thrombocytosis. Normal blood values were present in four (cases 2, 7, 8, 12).

Hepatic: Bromsulphalein retention was increased in all cases when performed, while decreased albumin/globulin ratio was the next most frequently observed abnormality. Portal vein pressure was normal in one patient (case 5) and abnormal in another (case 6). Other laboratory results were variable, and only one patient (case 6) demonstrated progressive hepatic dysfunction. Liver biopsies obtained in several cases at time of splenectomy exhibited fibrotic changes in addition to Gaucher cells.

Splenectomy did not appear to alter liver function nor did laboratory values correlate with the degree of hepatomegaly, except in one patient (case 2). Three patients (cases 1, 2, 14) displayed considerable variation in liver size without evidence of progressive dysfunction — a finding not emphasized in other reports.

Renal: One patient (case 4) had a history of multiple kidney infections, and another (case 2) has bilaterally enlarged, but otherwise normal, kidneys. A third patient (case 11) when recovered from acute glomerulo-tubular nephritis, demonstrated normal kidney function. His brother (case 10) had normal kidney function when enlarged kidneys were noted on pyelography, but died seven years later in renal failure. Otherwise, all patients had normal kidney function. Renal tissue available in only two patients (cases 8, 13) did not reveal Gaucher cells.

Skeletal: All of the patients examined radiographically exhibited long bone involvement characteristic of Gaucher's disease including multiple pathologic fractures (cases 6, 13, 14), fractures of the femoral head or neck (cases 2, 4, 16) and classical widening of the femoral shaft (hour-glass deformity). A femoral prosthesis was required in one (case 16) and two others (cases 13, 14) eventually had amputations of affected extremities.

Miscellaneous: The acid phosphatase was variable and abnormal in all patients studied.

A normal chromosomal analysis was demonstrated in the blood leukocytes of four patients (cases 2, 6, 9, 16). Chromosomes of one patient (case 14) exhibited non-specific changes. Glucocerebrosides isolated from the spleen of one patient (case 16) by Drs. Duboff and Radin made up 2.58% of the wet weight and 11.2% of dry weight. This represents a 100-fold increase based on normal values of 0.05 to 0.1% of dry weight[6] and is consistent with values obtained by Uzman.[9]

Discussion

Once regarded as a neoplasm of the spleen, Gaucher's disease is now considered to be the clinical expression of an enzyme deficiency[10] resulting in the accumulating of glucocerebrosides throughout the reticuloendothelial system. This lack of specific cerebrosidase is demonstrated by "Gaucher's" leukocytes which fail to remove glucose from labelled glucocerebrosides.[11] The source of the accumulated lipid would appear to be the erythrocyte; the process of erythrophagocytosis accounting for release of the cerebrosides within the reticuloendothelial cell.[12] Certainly, the extensive involvement of marrow and spleen (documented in case 16 by extraction of the lipid) in this disorder can best be explained on the basis of erythrocyte destruction in these tissues. Accumulation of the lipid from other sources including endogenous production within the reticulum cell cannot be excluded and may contribute to the process.

The well-known increase in serum phosphatase activity is indirectly related to the defect in cere-

Table II
Selected Laboratory Values

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hemoglobin (gms%)	11.9		11.8	11.5	9.2	6.9	10.5	8.8	11	10.8	9.8	11.8	4.0	10.5	10.2	9.9
post splenectomy		12.6	12.4	11.5	11.5	10	15		16.3	12.3	11.1	16.4		11.8	11	10.6
Leukocyte (/mm^3)	4450		3950	4400	2700	3850	7500	2900	4000	4180	3550	3000	2050	3100	3800	2850
post splenectomy		10400	11000	20800	9050	11000	14500		12600	12700	11400	8000		14000	6900	13100
Platelets (1000/mm^3)	128	41	50	42	43	82	65	inc	49	76	dec	dec	dec	dec	59	35
post splenectomy		205	400	300	213	215	200		415	204	norm	280		202	360	615
Acid Phosphatase*			1.9	2.4		35KA		5.9KA	3.8		23KA			9KA	.89	1.33
post splenectomy		2.66	1.2	1.5		2.66			1.5		12KA			1.3		
Alkaline Phosphatase*		22KA		2.4		21KA		9.6KA	15KA		8.4KA			6.7KA		8.4
									11					2.6	5.1	29.0
Bilirubin (mg/100ml)		0.9	1.2	<1.2	5.1	0.4 3.3			1.8	0.9		2.0		<1.2	0.8	0.7 mg%
Bromsulphalein (% retention)		26	11						8	6.5				8		
		10				29.5								16		12
Serum Glut. Oxal. Transaminase (Units)		63	17	19		62			50					36	30	34
						200			38					45 113		
Serum Protein (gm/ml)		8.4	6.9	5.8 6.5	7.1	6.8	7.4	4.9	7.6	5.9	8.2		5.4	7.0 5.1	6.9	6.8
Blood Urea Nitrogen (mg%)	11	12	15	11	4.5	7			13	34,80	42			9	16	21
Nonprotein Nitrogen (mg%)							45	49			35					
Creatinine (mg%)	0.9			0.6		0.2			1.2	7.3	1.03				0.9	0.9

*All values in terms of Sigma units unless indicated as King Armstrong (KA)
Normal values for acid phosphatase <0.6 Sigma and <1 King Armstrong

brosidase activity. Gaucher cells are known to contain a high content of this enzyme[13] and may be responsible for its presence in the circulation. However, platelets and erythrocytes also contain relatively large quantities of acid phosphatase and it is possible that elevated serum levels result from increased destruction of these cells in the spleen. It is interesting to note that in the four cases in which acid phosphatase activity was measured before and after splenectomy a decrease in circulating activity was observed following operation concomitant with an increase in platelets. In addition one of the lowest value 0.89 sigma units appeared in case 15, a patient with a minimal degree of thrombocytopenia. Values following splenectomy remain elevated, however, and it must be assumed that the Gaucher cells contribute to the increased levels of the enzyme. Unfortunately, acid phosphatase activity in the present study was not determined by a single method and therefore it is not possible to speculate on the relationship of disease activity to enzyme levels.

Most of the reported cases are Caucasians; however, the disease apparently afflicts all races, including the American Indian, as described for the first time in this report. The observed autosomal recessive pattern of inheritance remains characteristic of the disorder,[4] although it is interesting to note that one patient had an affected son (case 15) and another a niece (case 7). Presumably both parents of these offspring were carriers of the trait. The relatively high incidence of the disorder in the Jewish population would support this possibility.

A number of complications of Gaucher's disease have been identified and were demonstrated in the patients presented. Cirrhosis, for example, has been described and differs from the usual microscopic picture in that Gaucher cells are found diffusely involving the portal spaces and sinusoids producing lobular distortion and increased interlobular connective tissue.[2,3] This finding was observed in the five liver biopsies obtained in the present study. The impressive hepatomegaly often seen in the disorder rarely leads to ascites, and end-stage hepatic disease has not been documented. Ominous in this regard was the need for a portal-caval shunt in one of the patients described (case 6) who subsequently died of hepatic damage following failure of the shunting procedure. The possibility of other forms of hepatic disease (i.e. serum hepatitis) could not be excluded. Previously noted vagaries of liver function tests also were observed (cases 2, 16); however, it would apear that measurement of BSP retention provides the best means of following significant clinical fluctuations.

Abnormal renal conditions would appear from our experience and that of others to be coincidental.

Skeletal abnormalities were noted in all but one (case 15) of the patients examined in the present study. Osseous pain severe enough to simulate osteomyelitis was observed in one patient (case 16) who seemingly developed increased medullary pressure which was relieved by repeated incision and drainage. Pathologic fractures are believed rare, and generally occur in the femoral neck (case 16) and rarely in the shafts of long bones, as noticed in three of our patients (cases 6, 13, 14).

Information on the treatment of the osseous manifestations of this disease is scant. The slow healing of fractures, as in case 14, has been noted by others.[14,15] Protection of the weight-bearing surface during the plastic stage of active necrosis has been recommended and indeed, four patients (cases 1, 4, 14, 16) in this series with fractures of the femoral head or neck responded to an extended period of non-weight-bearing. Rehabilitation was less than optimal in the last two, one of whom required a prosthesis and the other amputation.

The hematologic abnormalities are the most consistent and obvious manifestation of the disorder and have received considerable attention in view of the striking splenic involvement. Various combinations of anemia, leukopenia, and thrombocytopenia have been reported here and by others. A pancytopenia is present in the majority of patients, and apparently is the result of "hypersplenism" as evidenced by the prompt improvement which follows splenectomy and the failure of hematenic agents to influence the anemia. Case 7 demonstrated this peripheral destruction even though her spleen was nonpalpable. In those cases in which anemia persists following splenectomy, a myelophthisic process (marrow encroachment by Gaucher cells) is held responsible. Splenomegaly in itself often presents a problem in these patients producing symptoms of abdominal enlargement and crowding of other organs. Splenic rupture in Gaucher's disease is exceedingly rare.[16]

Splenectomy in Gaucher's disease does not appear to predispose the individual to subsequent infections. In the present series, 13 patients underwent splenectomy without mortality and have had no further symptoms related to thrombocytopenia. Gastrointestinal symptoms when present also were relieved in this group. Only one living non-splenectomized patient remains (case 1). He continues to have a variable thrombocytopenia but is otherwise asymptomatic 10 years after the diagnosis.

With respect to other disorders such as cholelithiasis and diabetes mellitus which some authors have considered to be related, only three patients in this series (case 7, 12, 14) had cholelithiasis and one (case 14) currently has a diabetic glucose tolerance test. It would seem reasonable, however, to expect a higher incidence of cholelithiasis in patients with an active hemolytic process.

The seven successfully completed gestations in three patients (cases 3, 7, 15) and one abortion (case 4) support the observations of others that pregnancy does not represent a significant risk to the patient or to the fetus.[17,18]

Therapeutic endeavors have been of little consequence in Gaucher's disease, and although it has been possible to manage some of the complications, the metabolic disorder persists unabated. It must be concluded that at present the therapeutic program should be aimed at reducing osseous complications and improving hematologic values. In this latter regard, the excellent results of splenectomy would indicate the necessity of considering surgery early in the course of the illness before the spleen has enlarged to the extent that the morbidity and mortality of the procedure is increased. Although removal of the involved spleen should neither alter the enzyme deficiency nor result in greater accumulation of Gaucher cells in other areas, splenectomy may decrease hemolysis, thus reducing the quantity of cerebroside presented to the reticuloendothelial system.

Providing such measures are carried out, there seems little evidence to indicate that longevity is reduced in this disorder. Only one and perhaps two deaths (cases 6, 13) in this series can be attributed to Gaucher's involvement. Certainly there is little to suggest that increasing general deterioration of the patient occurs with time although skeletal complications may progress. It would seem reasonable therefore to maintain an optimistic outlook for the patient with Gaucher's disease despite the lack of a specific therapeutic agent.

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Perinatal Tips

By Paul M. Zavell, MD
Detroit

The following case from the files of the Wayne County Medical Society Perinatal Mortality Study Committee is presented as an aid in continuing education:

Maternal

This was the second born of a gravida II, Para I (II) 22 year-old black, unmarried mother of O-positive blood type. Her first child is home alive and well.

The mother attended an OB clinic in a large city hospital and she was seen only at three and five-and-a-half months of her pregnancy. At the three month visit her blood pressure was 88/50, weight was 145 pounds (usual of 140 pounds) on a 5'3" frame, VRDL was negative and her urine showed 2+ albuminuria. At the five-and-a-half month visit she weighed 142 pounds, urine exhibited occasional white blood cells with 1+ albuminuria, blood pressure was 110/70 and there was ± pedal edema. Although she was instructed to return regularly she failed to do so until delivery of her infant at 38-39 wks.

Three days prior to coming to the hospital she had sudden onset of a gush flow of vaginal amniotic fluid but this quickly stopped with only a slow, occasional drip noted thereafter. When questioned later she did state that this was occasionally blood streaked.

At the time of delivery she had a temperature of 100° (O) with a "bad head cold" and sore throat. Her blood pressure was 130/90 with 2+ albuminuria and slight pedal edema. When seen she was fully effaced and dilated. Spinal anesthesia was given and 25 minutes later from left occipital anterior position her infant was born. Estimated blood loss was 150cc and the placenta and cord were stated to have changes consistent with amnionitis.

Following delivery significant studies on the mother revealed a throat culture with growth of staph aureus, coagulase positive and hemoglobin of 9.5 grams (Hct of 27). The throat infection was treated with Erythrocin, 250 mgm qid. With bed rest her blood pressure returned to 90/60, the pedal edema cleared and her urine became free of protein. She was put on Feosol Tablets for her anemia.

Fetal

At birth this six pound, 4½ ounce black male infant was pale and breathed immediately but showed poor muscle tone. The Apgar at one minute was estimated at six and at five minutes at seven, despite suction and facial oxygen and warming in an incubator. Cord blood sent to the lab revealed the infant to be of A-positive blood type and Coombs +2. A CBC showed "tremendous amount of nucleated Rbc's" and WCB was 38000 (corrected), with hemoglobulin of 10.1 grams and hematocrit of 30.3. By 45 minutes of age despite intensive care in the nursery the infant was now showing signs of respiratory distress (resp. rate of 70/minute and Ht rate of 160/minute). Arrangements were made to transfer him to a neonatal intensive care unit at another hospital.

At three hours of age he arrived at the NICU, appearing quite pale and with respiratory distress apparent. A portable chest x-ray revealed a "clear chest with a globular heart (borderline in size) and a small amount of gas in the stomach and proximal bowel." Hgb was 6.4 gm with 29 PMN 06 Bd, 61 Lymph, 01 Mono and 03 Basophils, and 227 nuc Rbc/100 Wbc on the smear. Blood gases were obtained that showed a Ph of 6.97, P CO_2 of 26, P O_2 of 57 and O_2 saturation of 84. Bilirubin was 0.0 mgm %. Hemoglobulin Electrophoresis later showed Hemoglobulin F of 56.8% (50-85% normal), Hemoglobulin A_2 too low to detect and Hemoglobulin A of 43.2%.

Treatment cosisted of passage of an umbilical catheter and intravenous 10% G/W in 0.2NS with added sodium bicarbonate and use of oxygen in an isolette. Aqueous penicillin 100,000 UI.M. every 12 hours and Kanamycin 25 mgm every 12 hours intramuscularly were started after a blood culture was drawn.

At four hours of age the infant seemed to be getting worse. Repeat hemoglobulin was 2.9 grams with 11.0 hematocrit and 59,000 platelets. An emergency exchange transfusion was performed using 450 cc packed O negative red blood cells. At the time of the exchange physical exam revealed liver four to five centimeters down and firm while the spleen was "slightly edematous" to palpation. The impression was "anemia, severe — probably hemolytic disease of the newborn, possible hemoglobinopathy, doubt ABO or unusual Rh blood incompatibility." Despite the exchange that took two and a half hours due to frequent plugging of the tubing the infant did progressively poorer and died at eight and a half hours, of cardiac arrest. External cardiac massage and intracardiac adrenalin (0.15 cc of 1: 10,000) were of no avail. A post mortem was done.

(Continued on page 334)

Doctor Zavell is a member, Neo-Natal and Hospital Care Committee, Michigan Chapter, AAP, and chairman, Perinatal Mortality Study Committee, Wayne County Medical Society.

Letters

Long-Term Study of SIDS Continuing in Michigan

To the editor,

I have refrained from joining the controversy regarding Doctor Kadlub's recent article (Mich. Med. Nov. 1974), except to say that his theory could very well be included with many others, especially the one that claims that regurgitated stomach content could irritate the pharynx and by vagal inhibition cause laryngospasm and even bronchospasm in sudden unexpected death of infancy.

However, I am writing to you to acquaint our MSMS membership that there has been a long-term study of "crib deaths" or the Sudden Infant Death Syndrome in Michigan since 1959. As Deputy Medical Examiner of Wayne County I have been conducting this study which is continuing. At my suggestion, the UM School of Public Health assigned Dr. William Burnett who complemented my study by an extensive epidemiologic survey based on the Wayne County Medical Examiner cases. The results were included in a dissertation in compliance for his Ph.D. degree in Epidemiology at the University of Michigan. The results of our combined studies have been corroborated by many fine workers, but research is continuing both in the U.S. and other countries.

Sincerely,
Clara Raven, M.D.

(Editor's Note: Copies of Doctor Raven's article, which was published in the March, 1974 issue of the Journal of the American Medical Women's Association, are available from Doctor Raven or MSMS Headquarters.)

Attorney Warns Physicians of Business Tax Bill

To the editor,

Professional men should be up in arms against House Bill 4640, introduced March 18, 1975. The House Taxation Committee held hearings on this bill Wednesday mornings for the past three or four weeks and the bill is still in that committee.

From 1953 to 1967 we had the infamous business activities tax foisted on us by certain companies, which subsidized them at the expense of small businessmen and professionals. Essentially, it was a tax on gross income, and so is the new bill. I haven't studied it in great detail, but I am told that the effect is a definition that starts out with net income and then adds back in the cost of labor, etc., just as the business activities tax did.

As every small businessman and professional knows, it is easy to have gross income with little or no net profit.

I thought you might want your *Society* to fight this bill, and that is why I have written to you.

Best regards,
John N. Seaman
MacLean, Seaman, Laing and Guilford
Attorneys and Counselors
Lansing

Editor's Note: The May 6 issue of the GONGWER News Service, Inc.'s Michigan Report *details a Senate Taxation Committee study which reveals physicians and surgeons would be hit hardest among unincorporated businesses, by the governor's proposed business privilege tax. MDs would pay 30 to 54 per cent more tax, or an average of $267 for small firms and $1,649 more for large ones annually.*

Gender Has No Relation To Professional Competence

To The Editor,

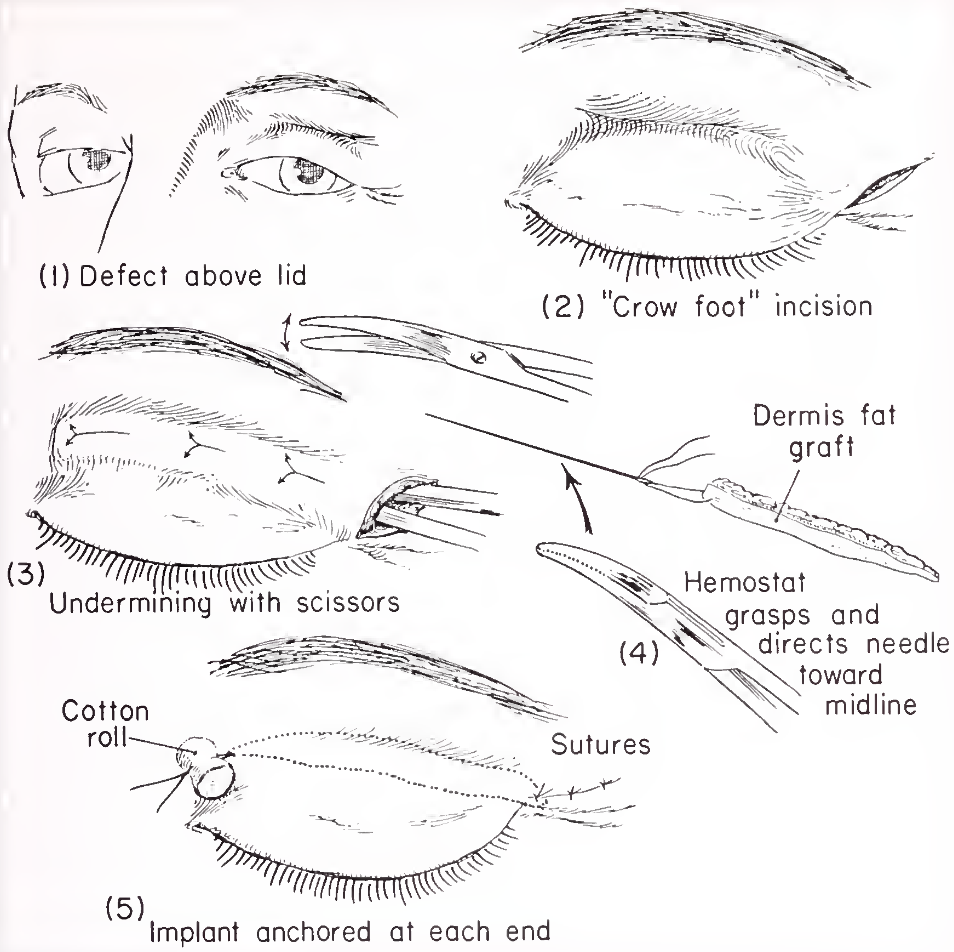
I am writing in reply to Mr. William B. Cheeseman's letter in your March issue. His point that a person's sex and parental role has nothing to do with professional competence is well taken.

Nevertheless, it would have meant a great deal to me as a medical student in 1964-1968 to be reassured that physician, wife and mother were not incompatible roles. My female classmates and I were asked how we could possibly combine parenthood and medicine by premed counselors, medical school admission committees, and directors of medical education. No one seemed worried about responsibilities of being a husband and father.

It's not our image as wives and mothers that has held us back in medicine but the belief that we can't do both and do them well. When this myth is finally laid to rest it won't be necessary to list my children in my curriculum vitae.

Sincerely,

Mary O. Anderson, M.D.
Leonidas


(1) Defect above lid
(2) "Crow foot" incision
Dermis fat graft
(3) Undermining with scissors
Hemostat grasps and directs needle toward midline
(4)
Cotton roll
Sutures
(5) Implant anchored at each end

1. Illustration of technique

The Dermis Fat Graft for Correction of The Eyelid Deformity of Enophthalmos

By David Hawtof, MD
Southfield

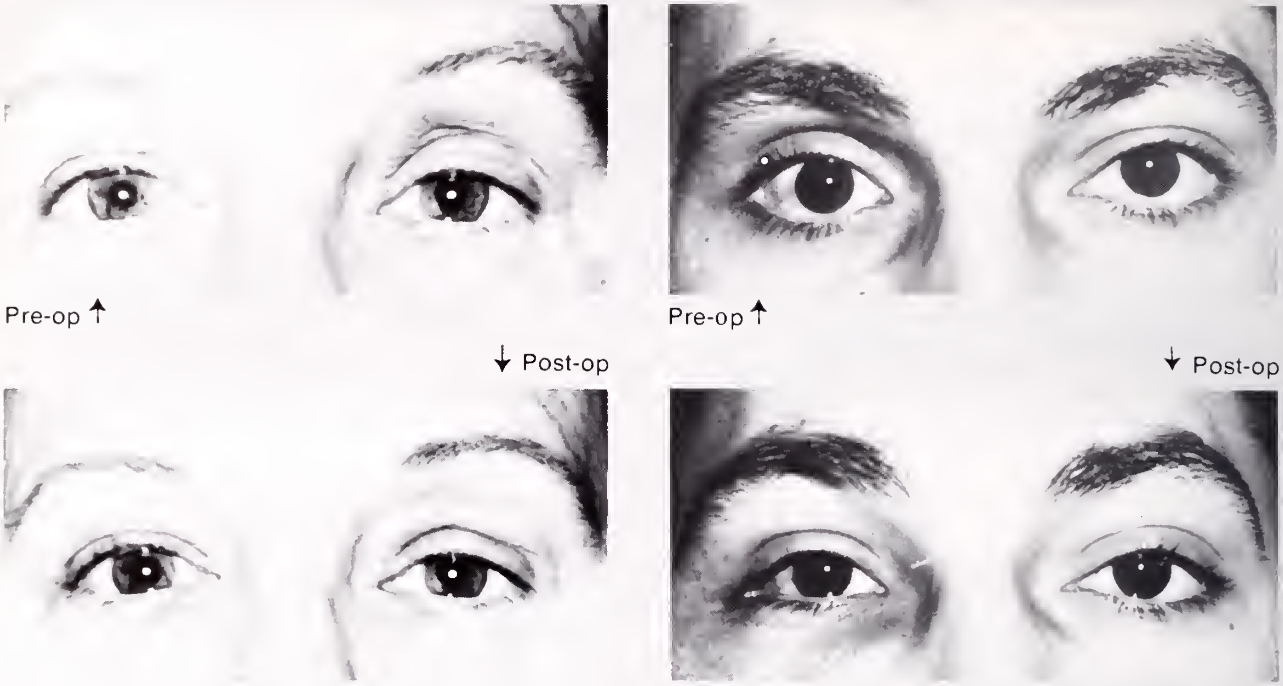
Accentuation of the supratarsal fold associated with enophthalmos is a significant cosmetic residual following severe facial trauma. Due to the extensive nature of the initial injury, this deformity has unfortunately received more apathy than reconstructive attempts. A method was needed to improve this deformity. Satisfactory results have been obtained using a dermis fat graft to the upper lid, and when indicated, a silastic orbital floor prosthesis.

Padgett and Stevenson[2] as well as Kazanjian and Converse[1] mentioned dermis grafts for eyelids without illustration of their technique. The use of the subcutaneous dermis graft has been reviewed by Thompson.[5] Peer [3] discussed the history of restoration of defects of facial contour using dermis grafts. Sherman [4] suggested improving the bulk beneath the brow with fascia lata. Fat grafts were recommended by Uchida[6] in a cosmetic procedure for increasing the upper lid fullness in elderly orientals. He advocated lid incisions from medial to lateral canthus.

Technique

The area of deficiency of the upper lid is outlined and infiltrated with a minimal amount of local anesthetic with epinephrine. A lateral incision is made in the direction of skin creases and a subcutaneous tunnel undermined with small blunt tip scissors. Hemostasis is acquired with gentle pressure. An elipse of hairless skin is outlined, the epidermis is shaved and the dermis and a very small amount of attached subcutaneous fat is sharply excised.

The author is affiliated with Providence Hospital, Southfield, and with Wayne State University.



2. Preoperative and several month postoperative examples

A nylon suture is passed through one end of the dermis fat graft and threaded on a straight needle, (see Illustrations). The needle is then passed through the eyelid tunnel in the jaws of a curved hemostat and advanced through the skin of the medial end of the tunnel. This suture is used to pull the graft into the tunnel and is tied over a small cotton bolster. The dermis of the graft is placed against the dermis of the skin in the recipient area. A few fine nylon sutures are used for closure, one of which may be passed through the tail of the graft to maintain its position.

When the orbital floor is depressed, an exploration of it with insertion of a silastic implant may be indicated. General anesthesia is unnecessary for the dermis graft unless orbital floor exploration is carried out.

This procedure has been used in seven cases with satisfactory results *(Figures 1, 2)*. No cysts or infections have occurred. Follow-up has been up to three years. The procedure has also been satisfactorily used in the enophthalmic lid of sightless eyes.

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Summary

Following extensive facial trauma some patients exhibit a prominent upper eyelid fold with enophthalmos. This had been improved by use of a dermis fat graft to the upper lid. Some patients need, in addition, a silastic orbital floor implant.

The First Pregnancies After Treating of Oligospermia By Collected and Stored Human Semen

By George Silló-Seidl, M.D.
Frankfurt, Germany

Summary

A method of collection, concentration and freezing of oligospermic ejaculate is described. Samples are collected until at least 50 million living spermatozoa are stored or the storage does not extend six months. The samples are thawed and inseminated on the ovulation day. Eleven of 67 patients finished the treatment. Six of 11 women conceived. Four of these delivered normal full-term babies. One patient aborted, one has been followed up to the fifth month of pregnancy. The collection and storage of ejaculates is a possibility in the treatment of couples barren because of the male factor, if hormone administration has been unsuccessful or the patient refused it.

Veterinary medicine extends bull semen in several samples to inseminate more cows with the same ejaculate. This procedure gave me the idea to apply the vice-versa way to treat couples barren because of the oligospermia of the husband.

It is known that hormone therapies have a low success rate (35 percent)[3] in cases of oligospermia. On the other hand, many patients do not agree with a long treatment. A method to help these men is the collection of oligospermic ejaculates by freezing.

Procedure

1. Ejaculates are collected no more than once weekly after sexual abstinence of five days or more.
2. Spermatozoa are concentrated by centrifugation (five minutes at 3000 r.p.m.) to one ml and frozen by the Behrman & Sawada method.[1]
3. The concentration and freezing process of specimens are repeated until the number of living spermatozoa reaches 50 million or the storage does not extend six months.
4. The number of fertile (living) spermatozoa is calculated by multiplying the volume of ejaculate by the number of spermatozoa in ml and the percentage of progressive motile and normally formed sperms.
5. The day of ovulation is indicated by visual control of the patency of the cervical os and of the transparency of the mucus. This procedure[2] is more precise than the judge of basal body-temperature. Therefore "one shot" insemination is practised.
6. After the collected material has been thawed, the semen is reconcentrated to one to three ml.
7. Various techniques for the actual insemination can be used.

number of insemination	number of collection	motile sperms in million	
		prefreeze	posthawing
8	2	53.9	0.9
5	2	79.5	36.8
1	3	8.7	3.8
4	5	87.2	6.6
2	3	66.4	10.2
1	2	45.9	3.2

Table 1. Number of inseminations and collections for the successful insemination, the number of motile spermatozoa before freezing and after thawing.

Material and results

Of the 67 patients 20 did not finish treatment, 11 finished and 36 are still continuing the treatment. In six out of 11 cases, the collected and stored method was successful (*Table 1*). The first pregnancy ended with miscarriage, then four boys and one girl were born. The children are now 4, 3, 2, 1 and ½ years old. All are in good health.

The author is with the Paracelsus-Clinic for Barren Couples, Frankfurt a.M., Germany, Thorwaldsen – Str. 19.

PERINATAL TIPS/*Continued*

Maternal blood sent with the baby when he was transferred to the NICU was retyped and confirmed as O+. Autopsy findings were compatible with Rh Iso-Immunization due to AO incompatibility and early respiratory distress syndrome. Blood and C.S.F. cultures were all negative.

Perinatal Committee Comments

1. Whether a patient is a clinic or a private patient there is continual need for stressing adequate prenatal care to the patient (including *at least* monthly visits initially and more frequent visits as term approaches).
2. Prolonged rupture of membranes (three days) and signs of infection in the mother (temperature, head cold, and sore throat) should alert the doctors involved of possible infection problems in the infant. This is where close communication between the obstetrician and the pediatrician is essential.
3. Use of oral iron medication rather than blood to correct the mother's anemia is commended.
4. Although blood incompatibility due to AO or BO usually reaches a peak where exchange may be needed on the third or fourth day of life, it must be remembered that occasionally a swift course of only a few hours will occur as poignantly shown here.
5. With the great amount of activity occurring (nuc., Rbc's, dropping Hgb) the committee doubts the accuracy of the 0.0 mgm% Bilirubin as reported here. One must use clinical judgment and not rely on laboratory results only.
6. Although it would not be of use here, in jaundiced prematures and in jaundiced ABO blood incompatibility, consideration of the use of the bilirubin photo-therapy lamp and (where appropriate) phenobarbital orally is in order. However, complete reliance on these alone (without appropriate exchange transfusion) is to be condemned.

OLIGOSPERMIA/*Continued*

(Table 2).

Conclusions

It is found that 20 to 80 percent of the prefreezing motility of the sperm is retained after thawing *(Table 1)*.[1] Therefore the grade of post-thawing damage is unknown. This means that the patient will be inseminated with a low number of living spermatozoa. Otherwise, my material published elsewhere[4] shows that 11 of 246 full-term live babies were conceived with less than one million, 16 with less than three million and 15 with less than five million progressive, motile and normally formed spermatozoa. It is supposed that the sperm after thawing have an extraordinarily high fertilizing capacity because they survived. Consequently, a low number of thawed living sperm does not represent ipso facto successfulness. But for better results a higher fertlizing capacity is desirable.

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age of mother	sterility in years	duration of pregnancy in days	child			pregnancy, delivery
			sex	weight gramm	height cm	
39	18	143	—	150	20	miscarriage
27	5	264	boy	2510	48	caesarian section because of primary uterine inertion
30	6	298	boy	5000	54	normal
27	3	291	girl	2550	41	caesarian section because of placenta praevia
31	3	260	boy	3600	52	grav. m. V. normal
41	4	269	boy	2860	50	normal

Table 2. Data about the pregnancies and deliveries after inseminations with collected frozen semen.

MEETINGS

June 11 — The Council, MSMS headquarters, contact: Warren F. Tryloff, director.

June 11-12 — PAS and MAP tutorial session, including PSRO legislation, at headquarters, Commission on Professional and Hospital Activities, contact: CPHA, 1968 Green Road, Ann Arbor, 48105.

June 15-19 — AMA Annual Convention, Atlantic City.

June 16-20 — Educational course, "Advanced Techniques for the Health Record Analyst," at headquarters, Commission on Professional and Hospital Activities, contact: CPHA, 1968 Green Road, Ann Arbor, 48105.

June 20-21 — Upper Peninsula Medical Society, Holiday Inn, Marinette, Wis., contact: Harold P. Brukardt, MD, chairman, 435 First St., Menominee, 49858.

June 20-21 — Annual Keyport Trauma Day, Otsego Ski Club, Gaylord, contact: Benjamin E. Henig, MD, 604 Peninsular, Grayling, 49738.

June 23-29 — Northern Michigan summer postgraduate course for physicians, sponsored by U-M Medical Center, at Shanty Creek Lodge, Bellaire, contact: Robert K. Richards, Towsley Center, U-M, Ann Arbor, 48105.

June 27-29 — Annual meeting and symposium on pediatric dermatology, Michigan Dermatological Society, Bay Valley Inn, Bay City, contact: James D. Stroud, MD, 1590 W. Nine Mile Road, Southfield.

July 24-25 — Annual Coller, Penberthy, Thirlby Medical Conference, Park Place Motor Inn, Traverse City, contact: Laurence P. Skendzel, MD, Munson Medical Center, Traverse City, 49684.

July 26-27 — AMA Regional Continuing Medical Education Courses, Minneapolis, contact: CME Circulation and Records Dept., AMA, 535 N. Dearborn, Chicago, 60610.

Aug. 1-3 — Summer meeting, Michigan Psychiatric Society, "Psychiatric Treatment Today — and Tomorrow," Park Place Motor Inn, Traverse City, contact: Sidney Bolter, MD, meeting chairman, 16001 W. Nine Mile Road, Southfield, 48075.

Aug. 2 — The Council, Bay Valley Inn, Bay City, contact: Warren F. Tryloff, director.

Aug. 9-13 — Annual meeting and scientific assembly, Michigan Academy of Family Physicians, Park Place Motor Inn, Traverse City, contact: Rita Feldkamp, executive secretary, 933 Wing St., Plymouth, 48170.

Aug. 22-24 — Second Annual Regional Meeting, International College of Surgeons, North Detroit General Hospital, contact: Meyer O. Cantor, MD, North Detroit General Hospital, 3105 Carpenter, Detroit, 48212.

Sept. 13 — September Seminar, "Pathology of the Breast," Michigan Society of Pathologists, St. John Hospital, Detroit, contact: John F. Dunkel, MD, Department of Pathology, Michigan State University, East Lansing, 48824.

Sept. 24 — The Council, MSMS headquarters, contact: Warren F. Tryloff, director.

Sept. 25-27 — Postgraduate course, "Implant Surgery for Joints and Tendons in the Hand," sponsored by American Society for Surgery of the Hand, at Blodgett Memorial Hospital, Grand Rapids, contact: Alfred B. Swanson, MD, course chairman, 313 Blodgett Medical Building, Grand Rapids, 49506.

Sept. 30 — Annual Surgical Symposium of WSU and Children's Hospital departments of surgery, at Children's Hospital, contact: Maggie Stiegler, director, Department of Community Relations, Children's Hospital of Michigan, 3901 Beaubien Blvd., Detroit, 48201.

Oct. 8-9 — Joint meeting, MSMS Committee on Maternal and Perinatal Health, Michigan Society of Ob-Gyn, and Perinatal Association of Michigan, at MEA Conference Center, St. Mary's Lake, Kalamazoo, contact: Helen Schulte, MSMS headquarters.

Oct. 9-10 — 1975 Harold C. Mack Symposium on Physiology and Pathology of Reproduction, sponsored by WSU Department of Ob-Gyn and C. S. Mott Center for Human Growth and Reproduction, at Engineering Society of Detroit, 100 E. Farnsworth, Detroit, contact: Kamran S. Moghissi, MD, Scott Hall, WSU, 540 E. Canfield, Detroit, 48201.

Nov. 5 — MSMS Council, MSMS headquarters, contact: Warren F. Tryloff, director.

Nov. 11-13 — 1975 MSMS Annual Scientific Meeting, Michigan Inn, Southfield, contact: Helen Schulte, MSMS headquarters.

Commentary

This article has timely significance in light of recent and pending legislation regarding emergency medical care. In 1974, legislation was passed defining advanced emergency medical technicians and the training required to qualify as an EMT. Legislation has been introduced this year which would define and regulate ambulances. Emergency medical authorities are conferring now on a draft of a proposed package of bills that would establish a statewide emergency medical service system for Michigan. The package is proposed by John R. Otterbacher, chairman, Senate Committee on Health, Social Services and Retirement, and is under consideration by the Michigan Emergency Services Health Council.

Endotracheal Intubation: Not the Quickest, Safest Way to CPR

By Sidney N. Smock, MD
Ann Arbor

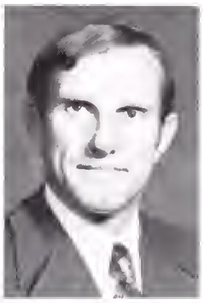
Endotracheal intubation for the initial pulmonary support of cardio-pulmonary resuscitation (CPR) is being nationally proposed and encouraged quasi-experts and legalized for paramedical personnel such as emergency medical technicians (EMT's) and respiratory therapists (RT's).[1,2] Even the current house and attending medical staffs of most hospitals believe an endotracheal tube must be placed as early as possible during CPR, as is evidenced by watching the cardiac arrest team. This false premise is the basis for recent legislation to legalize education of EMT's in this (questionable) initial technique of pulmonary support.

Intubation of the trachea is a difficult, time consuming technique. Even for the expert endoscopist, such as an anesthesiologist, valuable time may be wasted attempting to insert an endotracheal tube, especially in an inconvenient place such as the kitchen floor, automobile seat or street. For some patients, such as those still positioned in a wrecked automobile, the endoscopist may not be physically able to maneuver into position at the head of the patient without cutting a hole in the top of the automobile. Other pulmonary support techniques thus must be utilized.

Similarly, hospital intubation may be performed by a respiratory therapist or nurse on a low-lying bed or the floor. For such relatively inexperienced endoscopists, any intubation is difficult, let alone those compromised by less than ideal positions and locations.

EMT's and RT's have falsely assumed endotracheal intubation is the ideal CPR pulmonary support technique without recognizing it as an ego supporting procedure which medical students, inexperienced physicians or physician extenders take great pride in having performed. Frequently, the discussion in the conference room after the arrest is centered around who got to intubate the patient. Such might also be true during the shift change for the advanced EMT's back at the ambulance station. This is very unfortunate for the patient, since the most important factor at arrest time is to rapidly initiate adequate, immediate pulmonary support by any acceptable means with no delay.

Presently, advanced EMT's are still naive and their position among peers doesn't depend upon who got to intubate today or how many times one has done it. However, this competition will develop shortly unless they are properly oriented and educated that better, quicker techniques may be available. Thus, what should be developed by anyone attempting pulmonary support during



Doctor Smock

Doctor Smock is director of emergency medicine at the University of Michigan Medical Center. He is a diplomate of the American Board of Anesthesia and vice-president of the Michigan Emergency Services Health (MESH) Council.

CPR is a mature discretion as to what is actually best for the patient.

The experienced endoscopist may readily recognize another fallacy in the universal encouragement of endotracheal intubation: that is the need for the availability of operational laryngoscopes of varying sizes and styles. Illumination by these instruments is fraught with failure, especially when subject to abuse from bouncing around in the back of a rescue vehicle or in one's pocket. Thus initiation of pulmonary support may be further delayed by poor functioning or non-operational equipment.

If the laryngoscope is not operational and endotracheal intubation must be performed without illumination, this is not a technique for anyone other than an experienced anesthesiologist. Blind endotracheal intubation requires skill and luck, since most such attempts are apt to result in esophageal intubation.[3] Inadvertent esophageal intubation with an endotracheal tube will be fatal unless recognized immediately.

Alternative pulmonary support techniques are available for physician extenders which can be initiated quicker with less morbidity and mortality than endotracheal intubation. Esophageal obturator airway is one such technique which is initially equal to or better than endotracheal intubation.[4] No equipment is needed except the obturator airway which is blindly inserted with the patient in any position or location. The ease of introduction of the esophageal airway assures a quicker pulmonary support technique which then returns the arterial oxygen level equal to endotracheal intubation in most instances.

The ease of teaching the insertion of the esophageal airway is another favorable characteristic of this pulmonary support technique. Those of use who have taught EMT's to use the airway are impressed with the ease of teaching the proper technique to physician extenders.[5,6] Nurses, EMT's and RT's are able to recognize whether or not they hear breath sounds with a stethoscope. If any breath sounds over the chest are heard, then one knows the tube must be properly placed in the esophagus. If the tube is in the trachea, then no breath sounds are heard. This critical decision is much easier, from our experience, for physician extenders to make than is recognition of incorrect placement of endotracheal tube in the esophagus.

When those of us who have taught both esophageal obturator and endotracheal intubations compare the effort and success of these techniques, endotracheal intubation should be discouraged. The effort of anesthesiologists in teaching endotracheal intubation is horrendously large compared to esophageal obturator intubation. Many supervised endotracheal intubations are required for a physician extender to be a competent endoscopist, especially considering the previously mentioned undesirable positions that may be involved. This is not true of esophageal obturator airways which can be easily inserted with the patient in most any position including face down. The difference to remember is that most instrumentation of the pharynx is esophageal intubation.

Subsequently, it would also be extremely difficult and time consuming for anesthesiologists to retrain and assure maintenance of the endotracheal intubation skills by physician extenders, All advanced EMT's would have to be re-evaluated at least every six months for competency and possibly retrained.

Thus serious consideration by all concerned should be given as to the value of continuing to urge physician extenders to learn and practice endotracheal intubation when a better, easier-to-teach alternative such as esophageal obturator intubation exits. This questioning of the validity of endotracheal intubation for initial CPR is further supported by other quicker to initiate and easier to teach techniques, such as mouth-to-mouth or bag and mask. However, the latter techniques do not have the advantage of inhibiting vomiting. Vomiting does not interfere with the effectiveness of the esophageal obturator airway.

In summary, time delay before initiating adequate pulmonary support for CPR is extremely important. The technique utlized should be what is quickest, safest, and has the best chance for the patient's survival; in my opinion the technique of choice is the esophageal obturator airway.

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PEOPLE

Bernard D. Berman, MD, Oak Park,

is new director of the Genesee County Health Department, succeeding Donald W. McNaughton, MD, who resigned. Doctor Berman is former director of the Oakland County Health Department.

Jacques S. Gottlieb, MD, and Hermann Pinkus, MD, Detroit,

are recipients of Distinguished Service Awards presented at the 1975 Commencement activities of the Wayne State University School of Medicine May 18. Doctor Gottlieb was honored for his 22 years as chairman of WSU's department of psychiatry and 19 years as director of Lafayette Clinic. Doctor Pinkus was recognized for his 13 years as chairman of the WSU department of dermatology and for his dermatological research.

Robert C. Hendrix, MD, Ann Arbor,

is new president-elect of the Michigan Society of Pathologists. He is professor of pathology at the University of Michigan Medical School.

William N. Kelley, MD, Ann Arbor,

is new appointee as chairman of the U-M Department of Internal Medicine, effective Aug. 1. Doctor Kelley, now professor of medicine and chief, division of rheumatic and genetic diseases of Duke University Medical Center, succeeds William D. Robinson, MD, who has retired.

Robert E. Reed, MD, Ann Arbor,

is new director of the Inteflex accelerated medical degree program at the University of Michigan. Doctor Reed, associate professor of internal medicine, succeeds George R. DeMuth, MD.

Frank B. Walker, II, MD, Grosse Pointe,

has been appointed by the governor to the Michigan Higher Education Assistance Authority.

Wolf W. Zuelzer, MD, Detroit,

was honored at the recent Annual Clinics Days of the Children's Hospital of Michigan. Doctor Zuelzer, WSU professor of pediatrics, was honored for his achievements in the fields of pediatric hematology, immunohematology, pathology and leukemia.

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Before prescribing, see complete prescribing information in SK&F literature or *PDR.* The following is a brief summary.

> WARNING
> This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Indications: *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. **Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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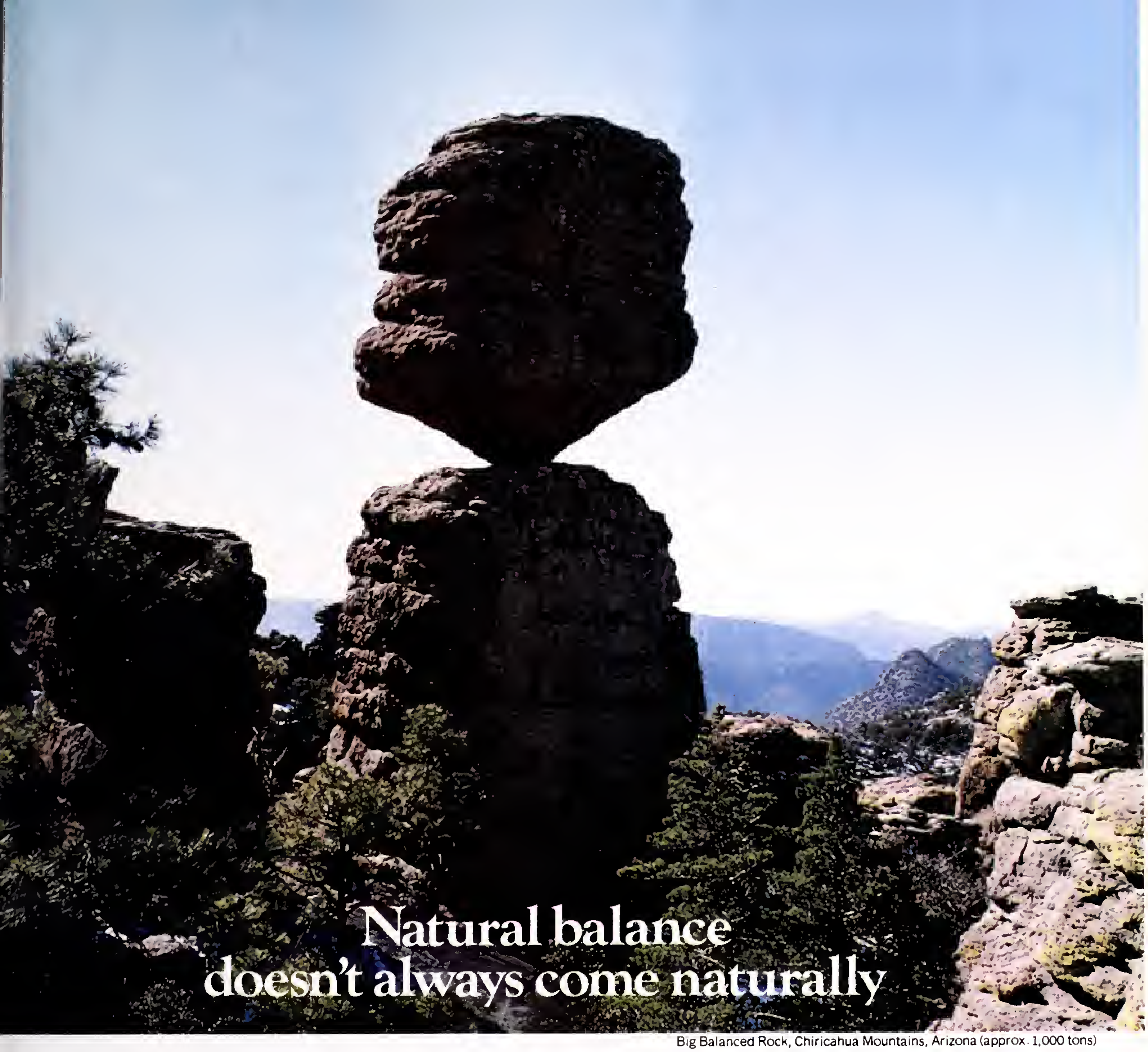

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*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

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Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

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Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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What It Is and What It Means

The National Health Planning And Resources Development Act

Practicing physicians must "make their voices known" in the implementation of the new National Health Planning and Resources Development Act, PL 93-641.

"If this new mechanism fails, another will come along, stronger and with less accessibility to physicians," warned Jay Endsley, director, Michigan Office of Health and Medical Affairs. Mr. Endsley spoke at a MSMS Forum on National Health Planning presented May 5 during the MSMS House of Delegates Annual Session.

"This act," Mr. Endsley said, "focuses on state control of health care delivery. But if it fails, I have no doubt another system, more radical and with stronger federal control, will be implemented."

Approaching the new act in a positive vein, Donald C. Smith, MD, special advisor to the governor on health and medical affairs, comments that through the new act, "instead of reacting after the planning is done, concerned providers and consumers can help to shape their destinies by acting. The next six months will be the crucial ones for their actions."

Mr. Endsley calls PL 93-641 "one of the most significant pieces of federal health care legislation in a long time." Robert Rice, MD, chairman, MSMS Committee on Federal Legislation, terms it "as significant as PSRO."

Doctor Smith says the new act "takes on even greater importance with the coming of national health insurance . . .for several reasons."

All three men enlarge on their views in accompanying articles in this issue.

The AMA currently is studying PL 93-641 with a view to possible litigation, according to Harry N. Peterson, MD, director, AMA Legislative Department. The AMA's legal counsel has been authorized to file suit to challenge the legislation on the basis that it is an unwarranted assumption of state authority by federal government and therefore unconstitutional.

The bill's passage at the close of the 1974 Congressional session was overshadowed in Michigan physicians' minds by their consuming effort to help solve their medical liability problems.

But there is no doubt of the great significance of the act. Even its passage by large majorities in both houses is significant.

So, too, are the Congressional "Findings and Purpose" as expressed in the introduction to the bill adopted by the House of Representatives.

Finding No. 1 marks the first time that equal access to health care for everyone, at reasonable cost, has been appropriated by the federal gov-

(Continued on next page)

The Second Time Around

By Donald C. Smith, M.D. and Thomas A. Jones, M.S.W. Lansing

The Comprehensive Health Planning Amendments to the Public Health Service Act were passed in 1966.[1] In taking this step Congress initiated a major effort to create a national health planning system.

About the same time, Congress authorized establishment of regional medical programs based on recommendations of the President's Commission on Heart Disease, Cancer and Stroke.[2] This

(Continued on page 346)

The Matrix For National Health Insurance

By Jay Endsley Lansing

The National Health Planning and Resources Development Act of 1974, P.L. 93-641, should be viewed as the second step in a three part matrix in preparation for the implementation of a national health insurance program. Rather than attempting to delineate specific features of the new planning law, this narrative deals with the relationship of this Act to other recent and imminent federal health legislation. Prior to discussing this

(Continued on page 353)

ernment as its own priority. In the second finding, the federal government acknowledges for the first time that the health care delivery system in the U.S. is failing in its goals to produce an adequate supply or distribution of health care which therefore can be equally accessible to everyone.

Conceived as a preparatory measure to a national health insurance program, the planning bill sets up an elaborate system of federal standards and regulations covering state and local health planning agencies and endowing them with strong power to force institutions to abide by planning decisions on services.

All new hospital building and expansion would be subject to rigid controls.

The new bill will replace the Comprehensive Health Planning Program and the Regional Medical Programs. It will further modify and extend the Hill-Burton Hospital construction program. States will be required to adopt certificate-of-need legislation governing the development of new institutional health services.

The bill also authorizes grants for demonstration projects with respect to the regulation of rates for the provision of health care.

Under the planning act, a system of health systems agencies (HSAs) will be developed much like PSRO areas. Local and state agencies will develop and implement both long-range and short-range health plans under national guidelines developed by the Secretary of HEW. The Secretary must issue such guidelines within 18 months and the guidelines will include standards respecting the appropriate supply, distribution and organization of health resources as well as a statement of national health planning goals expressed in quantitative terms.

The national guidelines are to include:

—The development of multi-institutional systems and coordination of consolidation of institutional health services (including obstetrics, pediatrics, emergency medical, intensive and coronary care and radiation therapy services);

—The development of medical group practices, health maintenance organizations and other organized systems for the provision of health care;

—The training and increased utilization of physician assistants, especially nurse clinicians;

—The adoption of uniform cost accounting, reimbursement and utilization reporting systems.

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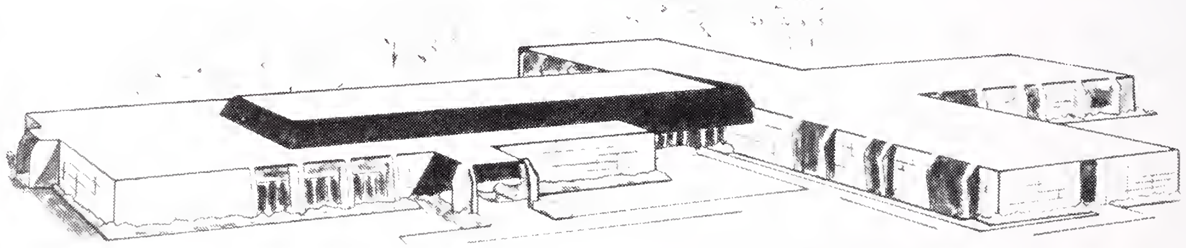

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was interpreted by many as a serious attempt to identify stratified levels of medical care and to promote development of a network of primary, secondary and tertiary care centers throughout the country.

These measures became part of the Great Society Program. While their enactment was surrounded by a certain degree of skepticism, they were generally regarded as two important and complementary legislative moves designed to increase the capacity of states and local communities to plan, organize and deliver health care services in a manner which would make the most effective use of existing resources.

By 1974 it was evident that both of these programs had achieved limited success. Participatory health planning, involving health providers and consumers, was difficult and time-consuming. One essential, but unfortunately elusive, ingredient of success was the ability to find individuals knowledgeable in the fields of human biology, health and disease, and in the techniques of planning to direct state and areawide comprehensive health planning efforts. An important lesson from regional medical programs was that they could not in themselves promote effective regionalization of health care services.

It was also evident that the Hill-Burton program had exceeded its original objectives. In many areas of the country "overbedding" had emerged as a major problem.[3] Furthermore, it was clear that future health facility planning would be meaningful only when aligned with other components of the planning and policy development process, in particular, health manpower and health financing.

But all was not lost. We had learned that comprehensive health planning was possible and could influence program development in some positive ways. Regional medical programs provided support which might not otherwise have been available for a number of educational and demonstration projects throughout the country. There was also good evidence that the potential for new and more influential health planning did exist and that fruition of that potential depended not only upon enlightened support from traditional, existing agencies, but also upon the creation of new kinds of health planning agencies.

National Health Planning and Resources Development Act of 1974

These considerations led Congress to formulate new legislation which capitalized on 30 years of experience with the Hill-Burton program and eight years of experience with comprehensive health planning and regional medical programs in a move to strengthen the country's health planning capabilites. Intensive discussions were carried out in both the Senate and the House. From these discussions emerged Public Law 93-641, the National Health Planning and Resources Development Act of 1974, signed by the President in January of this year.[4] The act has profound implications for future provision of health care services in this country. Initial steps in its implementation are underway.

The new act recognizes the urgent need for formulating an explicit national health policy. It establishes 10 areas of health concern which Congress believes should have priority. They range from the training and increased utilization of physician assistants to the development of multi-institutional systems for coordination or consolidation of institutional health services. More important, however, is the fact that the act provides us with the machinery for ongoing analysis, substantiation and refinement of national policy in the field of health.

The act consolidates under one organizational framework functions formerly performed by comprehensive health planning, regional medical programs and the Hill-Burton program. The nomenclature of the new system is not that different from that of the old. Areawide comprehensive health planning, or (b) agencies will probably become "health systems agencies (HSAs)." At the State level, the responsibilities of the State Health Planning Advisory Council (CHP), Regional Advisory Group (RMP) and the State Health Facilities Commission (Hill-Burton) will be assumed by a new body called the "Statewide Health Coordinating Council."

Once you have conquered the new organizational terms, it becomes quite apparent that the system envisioned in this act captures most of the strengths of its three predecessors, while avoiding their major weaknesses.

At all levels more will be expected of the new

(Continued on page 348)

Dr. Smith is Special Advisor to the Governor on Health and Medical Affairs and Acting Director of the Michigan Department of Mental Health.

Mr. Jones is Special Assistant to the Director of the Michigan Department of Mental Health.

The post-T & A patient:

another type for TYLENOL® acetaminophen products

When the post-T & A patient requires an analgesic, a new problem arises. Hemorrhagic tendencies following the use of aspirin after tonsillectomies have been reported.[1,2] In a patient who "...has recently undergone a surgical procedure or has another underlying hemostatic defect, aspirin ingestion may cause significant bleeding.... Aspirin is absolutely contraindicated in such situations. Acetaminophen...could replace aspirin in these instances."[3]

The post-T & A patient is only one of several 'types for TYLENOL' antipyretic-analgesic products—that is, patients who should avoid aspirin. Considering *all* of them, wouldn't it provide added safety (as well as added convenience) to recommend TYLENOL products routinely for simple analgesia?

References: **1.** Reuter, S.H., and Montgomery, W.W.: Arch. Otolaryng. *80*:214-217 (Aug.) 1964 **2.** Osol, A., et al., ed.: The United States Dispensatory and Physicians' Pharmacology, ed. 26, Philadelphia, J.B. Lippincott Co., 1967, p. 171. **3.** Schwartz, A.D., and Pearson, H.A.: J. Pediat. 78:558-560 (March) 1971

Precautions and Adverse Reactions: If a rare sensitivity reaction occurs, the drug should be stopped. Acetaminophen has rarely been found to produce any side effects.

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unified system. For example, HSAs will be required to perform more concrete and defined functions than the former (b) agencies. They must establish and publish, after appropriate consideration of national health policy, health systems plans (containing long-range goals) and annual implementation plans (delineating priorities, objectives and programs for a given year). Hopefully, their performance will be judged by their ability to convert these plans into action.

The Act ensures that health planning activities will be tied, for the first time, to resource allocation. What was once "review and comment" has now become "review and approval." At the state level, this authority extends to plans and applications made under the Public Health Service Act; the Community Mental Health Centers Act; and the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970. At present, it is difficult to determine the financial boundaries of this authority. But preliminary study indicates that, for the State of Michigan in Fiscal Year 1975-76, review and approval would cover a minimum of $20 million in incoming federal revenue. Depending upon rules and regulations, authority might extend to federal funds totaling well beyond $100 million.[5]

The act recognizes the need for closer ties between state and regional agencies. The potential for more effective relationships lies chiefly in two requirements:

(a) that 60% of Statewide Health Coordinating Council members be representatives of the Health Systems Agencies; and
(b) that the State Health Plan adequately reflect regional needs and resources as identified by the areawide agencies.

While these are all positive features, one should not infer that the act is perfect. A number of questions have already surfaced during the early stages of implementation. Some of these questions relate to policies inherent to the act and may not be answered short of further Congressional action. Others relate to the mechanics of the act; for answers to these questions, we await promulgation of rules and regulations by the Secretary.

Implementation Issues

In tracing implementation steps, we would like to touch upon some issues which are likely to receive particular attention in the months ahead.

Designation of Health Service Areas

The process of designating health service areas has sparked considerable controversy in some parts of the state. While by no means crucial to the overall success of the act, we believe the area designation process is important because it represents an initial test of our ability and willingness to translate national guidelines into program structures at the state and regional levels. This relatively mundane step in the act's implementation has implications for those steps which must be taken in the future — most notably, conversion of national health policy into state and regional policy and programs.

Designation of Health Systems Agencies

While the process of determining regional boundaries is being completed, we must turn our attention to establishment of health systems agencies. The act provides for a variety of legal structures. The agency may be a nonprofit, private corporation; a regional, general purpose, planning body, or a single unit of general, local government.

Responsibilities of health systems agencies are fairly well defined, particularly with regard to formulation of health systems plans and annual implementation plans, and authority to approve or disapprove applications for federal funds supporting health problems within their respective areas.

We are concerned about relationships established in the act between federal, state and local government with regard to both designation and operation of health systems agencies. We share the view that the state, rather than the Department of HEW, should have final word on designation of agencies.

Experience with comprehensive health planning has shown that when lines of authority run directly from the federal government to areawide agencies, attempts to develop strong state/regional relationships are hindered and become blurred. It will be particularly important that this does not occur as we move toward formulation of a State Health Plan.

Designation of State Health Planning and Development Agency

A most important issue concerns designation of the State Health Planning and Development Agency. In our own state, options currently available include:

(a) The Executive Office
(b) Department of Management and Budget
(c) Department of Mental Health
(d) Department of Public Health

Some criteria which are relevant to designation of the State Health Planning and Development Agency are:

(a) Should be an agency which is *not* directly responsible for program operation. (Reason: To avoid accountability problems which arise when the same agency is responsible for formulating public policy, approving plans which entail federal funds, implementing programs and evaluating its own activities.)
(b) Should be an agency which is directly responsible to the Governor, and, through

him, to the Legislature. (Reason: To assure integration with established policy-making processes.)

(c) Should be an agency which has established record in planning and policy analysis or resource development. (Reason: To fully capitalize on available resources and experience gained thus far by state government.)

(d) Should be an agency which has established working relationships with regional health planning bodies within the state, and with provider associations, consumer groups and our professional schools. (Reason: To ensure smooth and orderly transition to the new system, as well as effective operation once it is implemented.)

(e) Should be an agency which has established close working relationships with operational agencies and departments within the state government. (Reason: To control conflicts surrounding implementation of the state health plan.)

Decisions with regard to designation of health systems agencies and the State Health Planning and Development Agency must be supported through establishment of a sound statutory base at the state level. It will be important for us to develop legislation which is in keeping with new federal policy while, at the same time, is responsive to our special needs and reflective of our extensive resources here in Michigan.

Establishment of National Council on Health Planning and Development

A 15-member advisory council, known as the National Council on Health Planning and Development, is established by the act. The Council's principal responsibility will be formulation of national health policy. It will also have the responsibility for advising the HEW secretary with regard to administration of the act and evaluation of new medical technology implications for the organization, delivery and distribution of health care services.

National advisory groups, on the whole, have a mixed track record. They often do not achieve their intended purpose.

There are some important exceptions — the National Council of Economic Advisors, for example. An opportunity for another exception exists in the forthcoming National Council on Health Planning and Development. But to achieve its potential, the council must have a high caliber membership, a direct working relationship with the secretary, and staff support of prime quality and adequate quantity to carry out the council's responsibilities. Even though the council has not been appointed yet, its vital assignments, such as establishing national health policy, already have been made.

Prelude to National Health Insurance

The National Health Planning and Resources Development Act is important in view of the accomplishments and failures of the past. But it takes on even greater importance with the coming of national health insurance. This is true for several reasons.

First, the debate on national health insurance thus far has clearly demonstrated that while there is widespread agreement on the need for such a program, there is substantial disagreement about the exact form it should take. Resolution of differences in point of view has been impossible, in large part because the debate itself has been fraught with emotionalism and politics.

The National Health Planning and Resources Development Act creates a new forum in which rational policy analysis and development can take place. It provides an important opportunity for consumers, providers and those in government at all levels to shape both the scope and direction of national health insurance.

Second, disagreement over specific issues will persist for some time. This may be a blessing in disguise, for more and more people are now realizing that our health care system may not yet be ready for national health insurance.

In speaking to a group of health science writers last summer, Dr. Charles Edwards, then assistant secretary for health, acknowledged that, "There has been too much emphasis on what national health insurance will do, what kind of services will be covered, and how much it will cost, and not enough attention to the question of how we are going to be able to respond to the demand for health services that such a system is undoubtedly going to create."

Marshalling needed manpower, facilities and other resources in preparation for national health insurance will require detailed organization and planning. We will probably find that initially there are not enough resources to go around.[6] The need for firm action, particularly in establishing priorities to guide resource allocation, will be felt more than ever before. The new act represents a clear Congressional response to these needs.

Third, the American public appears willing to pour huge amounts of tax dollars into a national health insurance system. For these dollars, it holds high expectations in terms of improving access to health care services. Ongoing, systematic evaluation will be critical to determination of how well the health care system responds to these expectations.

An evaluation system must be capable of measuring the impact of national health insurance on the ability of individuals and families to obtain needed services. It must also be capable of determining programmatic strengths and weaknesses. Evaluation requires objectivity, best found in a system which would operate independently of a national health insurance program itself. In our judgment, the National Health Planning and Resources Development Act offers such a system.

Finally, many of the dollars, much of the planning, and all of the evaluation will go for naught unless we have the capability to convert our mistakes of the past into improvements of the future. Through the new system, consumers and providers will have the opportunity to participate in refinement of a national health program.

Conclusion

Seldom do providers and consumers have a "second chance" to play decisive roles during the formative planning stages of state and regional health care systems. The National Health Planning and Resources Development Act provides that opportunity.

With national health insurance on the horizon, the stakes are higher than ever.

This time, instead of reacting after the planning is done, concerned providers and consumers can help to shape their destinies by acting. The next six months will be the crucial ones for their actions.

With foresight, the Michigan State Medical Society has already taken action.

Three months ago, MSMS set up a special committee charged with the responsiblility of studying the Act, conducting an ongoing analysis of its provisions and impacts, and keeping its membership informed.

During the coming months, the Governor will be making a series of key decisions under this act. The Legislature will be considering enactment of a statutory basis for the new program. Informed input of both providers and consumers will be of value.

There is still time to provide that input.

And it would be unfortunate if this opportunity were passed up.

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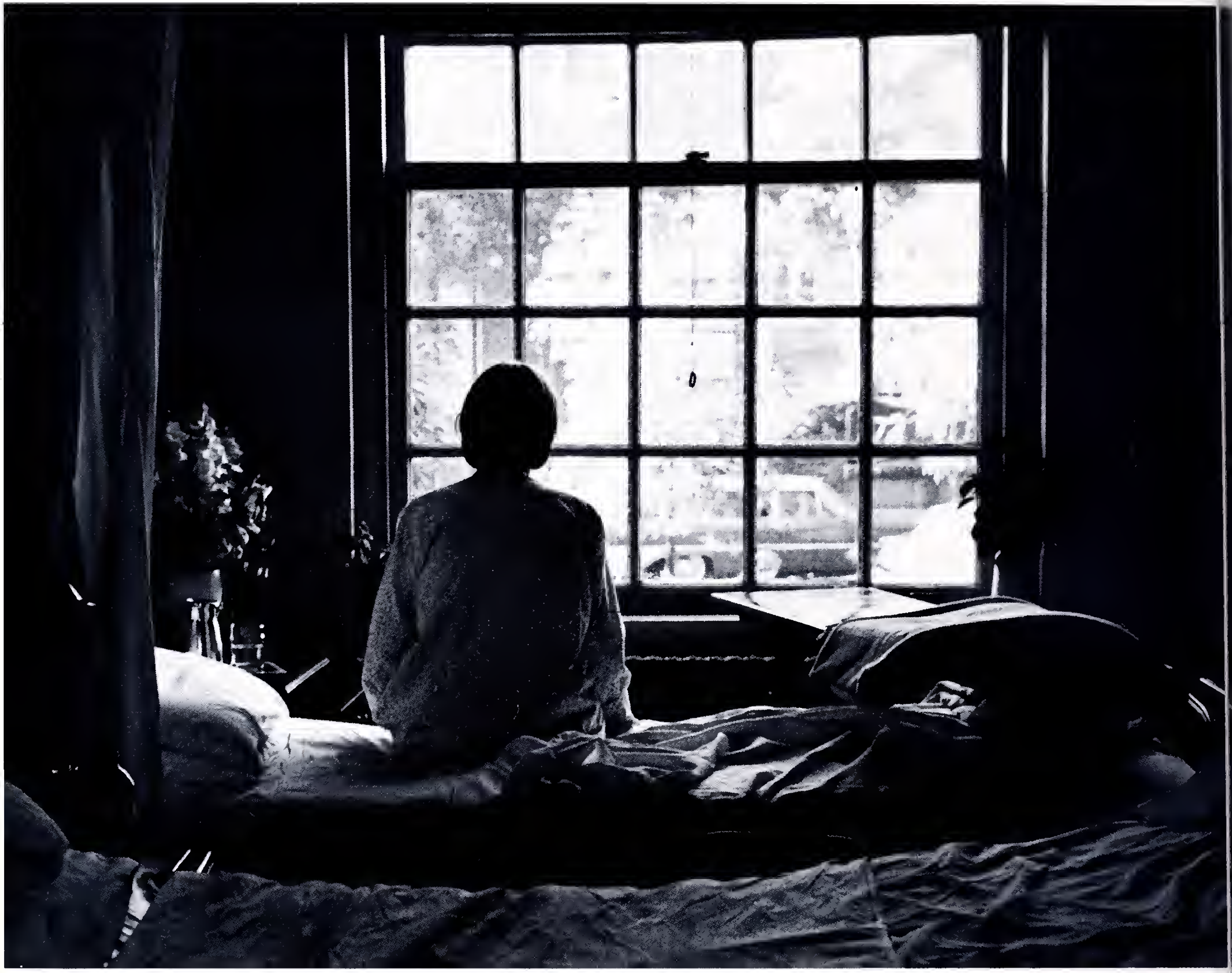

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relationship, however, it is essential to review and understand the findings of the Congress with respect to health care in this country.

There is no question that this legislation is responsive to the primary Congressional concern over the increasing federal expenditures for health care. Total federal spending has increased from $5.2 billion in 1965 to an estimated $31 billion in fiscal 1976, 88.8 percent of which will finance personal health services. Medical services financed under Medicare and Medicaid alone account today for $23 billion in federal funds.

Given the anticipated inflationary impact of national health insurance on the already staggering costs of health care, it is inconceivable from the federal perspective that any additional federal funding of health services would be implemented without some control over the health care industry.

It is also important to recognize that P.L. 93-641 was developed on a bipartisan basis with bills introduced in both the House and Senate and by the administration. Indeed, the original Senate version introduced by Senator Kennedy, the House version introduced by Representative Roy, and the administration's proposal introduced by Senator Javits included large sections of identical language. Final passage of the Act completed two years of discussion and debate over the administrative structure and the amount of control necessary on the part of the federal government.

It is also important to note that the vote in both the House and Senate were overwhelming. The Senate agreed to passage on a vote of 65-18 and the House 236-79. As recently as five years ago, such legislation would have had severe difficulty in passing either branch of the Congress and certainly no chance of passage with such large majorities.

Irrespective of personal philosophies, the issues in the Congressional debate were not related to some control versus no control. They were in fact discussions over the degree of control and the implementation strategy. A review of Congressional testimony and joint conference committee reports on the bill give clear indication that if the form of self-regulation by professionals and states contained in 93-641 is not effective, the federal government will implement additional, probably federally-based, control mechanisms.

Recent experience in Michigan shows a similar trend. Beginning in July 1974, the Governor's State Health Planning Advisory Council and the Office of Health and Medical Affairs began a process of establishing state health priorities. In developing these priorities, the views and participation of 150 health and health-related provider and consumer agencies within the state were solicited. As a result of this process, 21 health goals were established for the state and have been recommended to the Governor. While not as specifically oriented toward control of the health care field as the recent Congressional action, these goals do in fact relate to the need for better organization and management of the "health care system" than in the past. Only two of the 21 health goals are related to specific diseases. The remainder address issues of administration and management of a health care system.

> *"The fact is that the public and private sectors are inextricably interrelated and attempts to classify, categorize, or pigeonhole them are seriously mistaken."*
>
> *Alton G. Marshall*
> *President, Rockefeller Center*

As with the management of any scarce resource — and health care resources are scarce — better means of planning, budgeting, and management come to the forefront. Many of the same economic forces which have led toward the regulation of transportation, banking and communications are now working their way toward the health industry.

The view of the Congress implied by 93-641 is that, given the rapidly rising costs of health care, it is simply no longer possible to provide total health care to everyone everywhere. The health care system is now faced with deciding its priorities, a process of deciding who gets what kind of care, where, when, and under what circumstances. This then leads us to what I term a matrix in preparation for national health insurance.

Mr. Endsley

Mr. Endsley was appointed director of the Michigan Office of Health and Medical Affairs on April 14, after serving as acting director since June 1974. He also serves as advisor to the governor on health and medical affairs.

The matrix began with the passage of Title XI of P.L. 92-603, commonly known as the Social Security Amendments of 1972. Title XI creates the general provisions for professional standards review. The purpose of this Act as defined in the law is to "promote effective, efficient, and economical delivery of health care services of proper quality for which payment may be made . . ." The legislation establishes a system for determining appropriate levels of care and for measuring all care against peer-established standards. This law also attempts in an indirect fashion to regulate the costs of medical care by assuring that only "appropriate" services are provided to the patient. It is the first step in addressing the issue of what kind of services are provided, where and under what circumstances.

These same amendments also established state agencies to review proposals for the construction of new health facilities financed in part by the federal government. The provisions of this act stop short of authorizing disapproval of capital expenditures for facilities but they do empower HEW to impose financial penalties on facilities which fail to receive state approval.

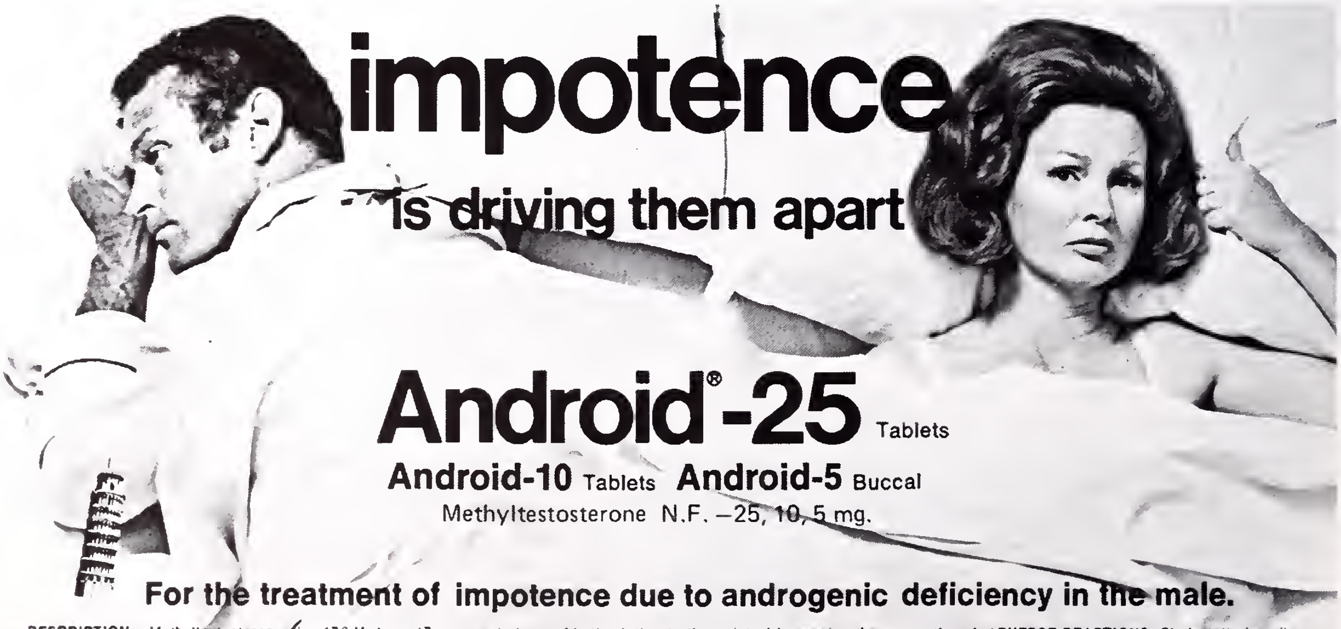
PL 93-641 Second In Three-Point Movement

The National Health Planning and Resources Development Act, P.L. 93-641, provides the second point in the matrix for implementation of national health insurance. Technically, the law abolishes existing comprehensive health planning programs, regional medical programs, and the Hill-Burton construction programs. These three programs are replaced with Title XV of the act which establishes a nationwide system of health systems agencies at the local level and, at the state level, creates a single state health planning and development agency and a state health coordinating council.

Title XVI of the act establishes a system for health resources development which includes many of the features previously contained in the Hill-Burton program and provides developmental funds for use by health systems agencies in implementation of locally determined plans and priorities. Under the law, health systems agencies (HSAs) retain many of the functions currently carried out by comprehensive health planning agencies.

The law, however, recognizes several problems which have existed with comprehensive health planning agencies at the local level. The first is that a major impediment to effective planning in the past has been simply a lack of adequate planning technology and expertise. P.L. 93-641 makes

(Continued on page 356)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Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

Final classification of the less-than-effective indications requires further investigation.

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Adverse Reactions: On rare occasions, oral administration of the drug has been associated in time with the occurrence of severe rash. When rash appears, the drug should be discontinued. Occasional overdosage effects such as transient palpitation or dizziness are usually controlled by reducing the dose.

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1. Gertler, M. M., et al.: Geriatrics *25*:134-148 (May) 1970.

quite specific provisions as to the professional expertise of staff of the agencies and establishes various technical assistance mechanisms to assist the agencies in the conduct of their functions. In addition, they are strengthened by the availability of developmental monies to implement portions of the locally determined health plan. Finally, and perhaps most significantly, the agencies have been provided a greatly strengthened role in effecting desired changes in the health care system. Under previous legislation, local planning agencies had only review and comment on proposed services funded under the Public Health Service Act.

Under P.L. 93-641, the agencies have review and approval of all funds coming into the area under the Public Health Service Act, the Community Mental Health Center Act, and the Comprehensive Alcohol Abuse and Alcohol Prevention, Treatment, and Rehabilitation Act of 1970. Additional authority is also provided to the HSAs and state agency in determining the need for new proposed institutional health care services and review of the "appropriateness" of existing institutional services. For new services, this amounts to certificate of need for the proposed services. This means that in Michigan the HSAs and the state planning and development agency will have review and approval over an anticipated 50 to 60 million dollars annually coming into the state under the Public Health Service Act and related authorities.

There are two issues of obvious concern with respect to health systems agencies. The first is that the agencies are designated by direct contract between the Secretary of HEW and the local applicant group. The state has only review and comment on the applications. The second is the clear intent of the law that the local agencies should be private, nonprofit corporations with minimal accountability to locally elected officials. All original versions of the law provided that only private, nonprofit corporations would be eligible for designation as a health systems agency. In order to obtain passage of the law, language was added which would allow units of local government and public planning agencies to be eligible for designation as HSA if certain conditions could be met. Indeed, the Department of Health, Education, and Welfare "Forward Plan for Health" includes the following: "recognizing that the U.S. health delivery system is basically a private enterprise system, the HSAs will be private, nonprofit organizations legally independent of all other organizations." Physicians may well find themselves in a dilemma on this issue.

Section 1526 of the Act also provides grants to states for the regulation of rates of reimbursement for health care services. This section provides for

(Continued on page 358)

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not more than six state agencies to receive grants for the purpose of demonstrating the effectiveness of state agencies in regulating rates for the provision of health care.

While Michigan will not be one of the states applying for funds under this provision, it is interesting to note the clear intent to provide federal reimbursement of experimental regulation systems by the state. While some 25 states are already reviewing or regulating rates of reimbursement for various portions of the health care service delivery system, P.L. 93-641 does not confine review of rates to those charged by institutional providers and, therefore, would provide states with an opportunity to experiment with the regulation of rates of reimbursement for individual providers of health care.

Federal funding of such experimentation is particularly significant, in light of the fact that national health insurance will most likely bring with it the form of regulation of hospitals and physicians most generally opposed by them — the establishment of hospital rates, and fee schedules that predetermine the cost of services provided.

Of the major health insurance proposals introduced last year, only the one advocated by Senator Long and Ribicoff proposes the continued practice of determining medical cost reimbursement after the service is rendered. Observation of the states receiving funds under this section of the Act should provide excellent indicators of future events under national health insurance.

The third and final point in the matrix for national health insurance is some version of a yet-to-be-passed national health manpower bill. In whatever form the bill is passed, it will almost certainly contain measures to regulate the distribution of medical manpower through payment for medical education. Virtually all of the health manpower bills currently before the Congress at the present time contain some provision for this regulation.

In preparation for the passage of federal legislation in this area, the Governor's State Health Planning Advisory Council has established a task force on health manpower needs. The fundamental objective of this task force is to develop a commonly-agreed-upon definition of "need" for health manpower on a geographic basis, to provide alternative policy options for meeting that need, and to develop linkages between needs and the allocation of resources and medical manpower to meet those needs.

The task force has been established in anticipation of national health manpower legislation with an eye toward having the state be an active participant in its implementation rather than reacting to a set of external circumstances.

Practicing Physicians Must Participate

Both the PSRO legislation and the health planning legislation provide ample opportunity for participation by the practicing physician as an essential component of the health care delivery system. Certainly, the health manpower legislation will require active participation by those physicians engaged in professional training in the university-based centers.

In the findings of the Congress related to the Health Planning and Resources Development Act, it is of great significance that the health care provider is specifically identified as one of the most important participants in any health care delivery system and that health policy must address the legitimate needs and concerns of providers if it is to achieve meaningful results.

The findings go on to state that it is imperative that providers be encouraged to play an active role in developing health policy at all levels. Such language was noticeably absent in previous health planning legislation.

Practicing physicians have demonstrated their willingness to be meaningfully involved in the determination of quality and costs of health care services under the initial phases of PSROs. Similar participation is essential if P.L. 93-641 is to be

(Continued on page 364)

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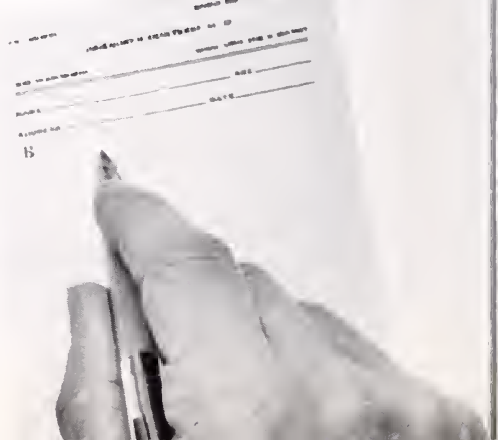
Bioequivalence



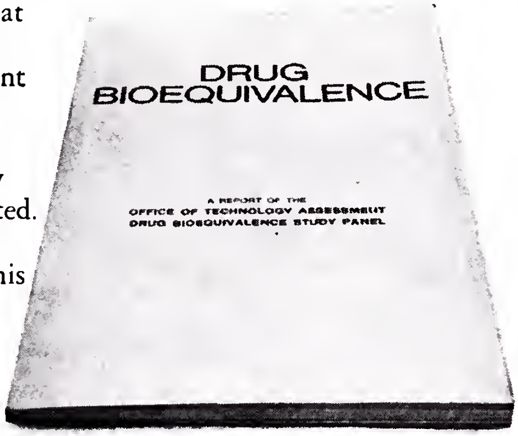
the weight of scientific opinion:

If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that product's safety and effectiveness simply because the chemical content was the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalency in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.


DRUG
BIOEQUIVALENCE
A REPORT OF THE
OFFICE OF TECHNOLOGY ASSESSMENT
DRUG BIOEQUIVALENCE STUDY PANEL

"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and
(b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or
(c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...

P·M·A

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
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*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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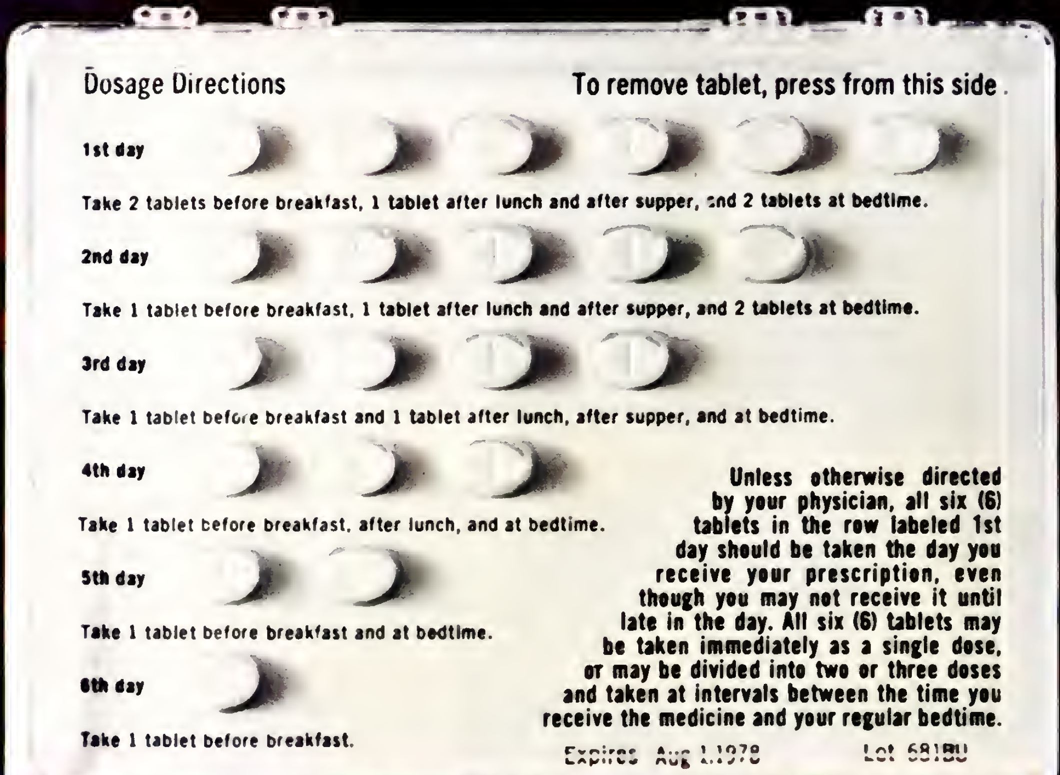

Dosage Directions

To remove tablet, press from this side.

1st day

Take 2 tablets before breakfast, 1 tablet after lunch and after supper, and 2 tablets at bedtime.

2nd day

Take 1 tablet before breakfast, 1 tablet after lunch and after supper, and 2 tablets at bedtime.

3rd day

Take 1 tablet before breakfast and 1 tablet after lunch, after supper, and at bedtime.

4th day

Take 1 tablet before breakfast, after lunch, and at bedtime.

5th day

Take 1 tablet before breakfast and at bedtime.

6th day

Take 1 tablet before breakfast.

Unless otherwise directed by your physician, all six (6) tablets in the row labeled 1st day should be taken the day you receive your prescription, even though you may not receive it until late in the day. All six (6) tablets may be taken immediately as a single dose, or may be divided into two or three doses and taken at intervals between the time you receive the medicine and your regular bedtime.

Expires Aug 1,1978 Lot 681BU

The explicit printed dosage instructions that accompany each Dosepak make it easy for the patient to understand and follow the dosage regimen.

Poison ivy and other severe allergic states intractable to adequate trials of conventional treatment will often respond to a short, intensive, adjunctive course of Medrol. Medrol Dosepak is designed to provide a tapered, six-day course of methylprednisolone tablets.

On occasion, a six-day course of Medrol therapy may not be sufficient and therapy may need to be extended. If there is continued contact with the sensitizing agent, corticosteroids will not completely suppress the inflammatory response. A further caution: If lesions become infected during Medrol therapy, it should be remembered that steroids may decrease resistance to infection and hinder the body's ability to localize an infection.

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INDICATIONS: 1. **Endocrine Disorders**: Primary or secondary adrenocortical insufficiency (hydrocortisone or cortisone is the first choice, synthetic analogs may be used in conjunction with mineralocorticoids where applicable, in infancy, mineralocorticoid supplementation is of particular importance). Congenital adrenal hyperplasia, nonsuppurative thyroiditis, hypercalcemia associated with cancer. 2. **Rheumatic Disorders**: As adjunctive therapy for short-term administration (to tide the patient over an acute episode or exacerbation) in psoriatic arthritis, rheumatoid arthritis (selected cases may require low-dose maintenance therapy), ankylosing spondylitis, acute and subacute bursitis, acute nonspecific tenosynovitis, acute gouty arthritis. 3. **Collagen Diseases**: During an exacerbation or as maintenance therapy in selected cases of—Systemic lupus erythematosus, acute rheumatic carditis. 4. **Dermatologic Diseases**: Pemphigus, bullous dermatitis herpetiformis, severe erythema multiforme (Stevens-Johnson syndrome), exfoliative dermatitis, mycosis fungoides, severe psoriasis. 5. **Allergic States**: Control of severe or incapacitating allergic conditions intractable to adequate trials of conventional treatment. Seasonal or perennial allergic rhinitis, bronchial asthma, contact dermatitis, atopic dermatitis, serum sickness. 6. **Ophthalmic Diseases**: Severe acute and chronic allergic and inflammatory processes involving the eye and its adnexa such as—allergic corneal marginal ulcers, herpes zoster ophthalmicus, anterior segment inflammation, diffuse posterior uveitis and choroiditis, sympathetic ophthalmia, allergic conjunctivitis, keratitis, chorioretinitis, optic neuritis, iritis and iridocyclitis. 7. **Respiratory Diseases**: Symptomatic sarcoidosis, Loeffler's syndrome not manageable by other means, berylliosis, fulminating or disseminated pulmonary tuberculosis when concurrently accompanied by appropriate antituberculous chemotherapy. 8. **Hematologic Disorders**: Idiopathic and secondary thrombocytopenia in adults, acquired (autoimmune) hemolytic anemia, erythroblastopenia (RBC anemia), congenital (erythroid) hyperplastic anemia. 9. **Neoplastic Diseases**: For palliative management of, leukemias and lymphomas in adults, acute leukemia of childhood. 10. **Edematous States**: To induce a diuresis or remission of proteinuria in the nephrotic syndrome, without uremia, of the idiopathic type or that due to lupus erythematosus. 11. **Miscellaneous**: Tuberculous meningitis with subarachnoid block or impending block when concurrently accompanied by appropriate antituberculous chemotherapy. Systemic dermatomyositis (polymyositis).

CONTRAINDICATIONS: Systemic fungal infections.

WARNINGS: In patients on corticosteroid therapy subjected to unusual stress, increased dosage of rapidly acting corticosteroids before, during, and after the stressful situation is indicated.

Corticosteroids may mask some signs of infection and new infections may appear during their use. There may also be decreased resistance and inability to localize infection. Prolonged use may enhance the establishment of secondary ocular infections due to fungi or viruses.

Since adequate human reproductive studies have not been done, the use in pregnancy, nursing mothers or women of childbearing potential requires that the possible benefits be weighed against the potential hazards to the mother and the embryo or fetus. Infants should be observed for signs of hypoadrenalism.

Average and large doses of hydrocortisone or cortisone can cause elevation of blood pressure, salt and water retention, and increased excretion of potassium. These effects are less likely to occur with the synthetic derivatives except when used in large doses. Dietary salt restriction and potassium supplementation may be necessary. All corticosteroids increase calcium excretion.

While on corticosteroid therapy, patients should not be vaccinated against smallpox. Other immunization procedures should not be undertaken in patients who are on corticosteroids, especially on high dose, because of possible hazards of neurological complications and a lack of antibody response.

The use of corticosteroids in active tuberculosis should be restricted to those cases of fulminating or disseminated tuberculosis in which the corticosteroid is used for the management of the disease in conjunction with an appropriate antituberculous regimen.

If corticosteroids are indicated in patients with latent tuberculosis or tuberculin reactivity, close observation is necessary as reactivation of the disease may occur. During prolonged corticosteroid therapy these patients should receive chemoprophylaxis.

PRECAUTIONS: Hormone therapy is an adjunct to, and not a replacement for conventional therapy.

Dosage should be individualized according to the severity of the disease and the response of the patient. As soon as a satisfactory clinical response is obtained, the daily dose should be reduced, either to termination of treatment or to the minimal effective maintenance dose level. The lowest possible dose should be used and when reduction in dosage is possible, the reduction should be gradual if the drug has been administered for more than a few days. If a period of spontaneous remission occurs in a chronic condition, treatment should be discontinued.

Drug-induced secondary adrenocortical insufficiency may be minimized by gradual reduction of dosage. This type of relative insufficiency may persist for months after discontinuation of therapy, therefore, in any situation of stress occurring during that period, hormone therapy should be reinstituted. Since mineralocorticoid secretion may be impaired, salt and/or a mineralocorticoid should be administered concurrently.

There is an enhanced effect of corticosteroids on patients with hypothyroidism and in those with cirrhosis.

Corticosteroids should be used cautiously in patients with ocular herpes simplex because of possible corneal perforation.

Psychic derangements may appear or existing emotional instability or psychotic tendencies may be aggravated by corticosteroids.

Aspirin should be used cautiously in conjunction with corticosteroids in hypoprothrombinemia.

Steroids should be used with caution in nonspecific ulcerative colitis, if there is a probability of impending perforation, abscess or other pyogenic infection, diverticulitis, fresh intestinal anastomoses, active or latent peptic ulcer, renal insufficiency, hypertension, osteoporosis, and myasthenia gravis.

Growth and development of infants and children on prolonged corticosteroid therapy should be carefully observed.

Blood pressure, body weight, routine laboratory studies, including 2-hour postprandial blood glucose and serum potassium, and a chest X-ray should be obtained at regular intervals during prolonged therapy. Upper GI X-rays are desirable in patients with known or suspected peptic ulcer disease.

ADVERSE REACTIONS: **Fluid and Electrolyte Disturbances**. Sodium retention, fluid retention, congestive heart failure in susceptible patients, potassium loss, hypokalemic alkalosis, hypertension. **Musculoskeletal**. Muscle weakness, steroid myopathy, loss of muscle mass, osteoporosis, vertebral compression fractures, aseptic necrosis of femoral and humeral heads, pathologic fracture of long bones. **Gastrointestinal**. Peptic ulcer with possible perforation and hemorrhage, pancreatitis, abdominal distention, ulcerative esophagitis. **Dermatologic**. Impaired wound healing, thin fragile skin, petechiae and ecchymoses, facial erythema, increased sweating. May suppress reactions to skin tests. **Neurological**. Increased intracranial pressure with papilledema (pseudotumor cerebri) usually after treatment. Convulsions, vertigo, headache. **Endocrine**. Development of Cushingoid state, suppression of growth in children, secondary adrenocortical and pituitary unresponsiveness, particularly in times of stress, as in trauma, surgery or illness, menstrual irregularities, decreased carbohydrate tolerance, manifestations of latent diabetes mellitus, increased requirements for insulin or oral hypoglycemic agents in diabetics. **Ophthalmic**. Posterior subcapsular cataracts, increased intraocular pressure, glaucoma, exophthalmos. **Metabolic**. Negative nitrogen balance due to protein catabolism.

DOSAGE AND ADMINISTRATION: The initial dosage may vary from 4 to 48 mg per day. **Requirements are variable and must be individualized on the basis of the disease under treatment and the response of the patient**. The proper maintenance dosage should be determined by decreasing the initial dosage in small decrements at appropriate time intervals until the lowest dosage which will maintain an adequate clinical response is reached. If after long-term therapy the drug is to be stopped, it is recommended that it be withdrawn gradually rather than abruptly.

ALTERNATE-DAY THERAPY (ADT): ADT is a corticosteroid dosing regimen in which twice the usual daily dose of corticoid is administered every other morning. The purpose of this mode of therapy is to provide the patient requiring long-term pharmacologic dose treatment with the beneficial effects of corticoids while minimizing certain undesirable effects including pituitary-adrenal suppression, the Cushingoid state, corticoid withdrawal symptoms, and growth suppression in children.

Medrol (methylprednisolone) or other short-acting (producing adrenocortical suppression for 1¼ to 1½ days following a single dose) corticoids are recommended for ADT. Complete control of symptoms will not be possible in all patients. When considering this mode of therapy, keep in mind the basic principles and indications for corticosteroid therapy. The benefits of ADT should not encourage the indiscriminate use of steroids.

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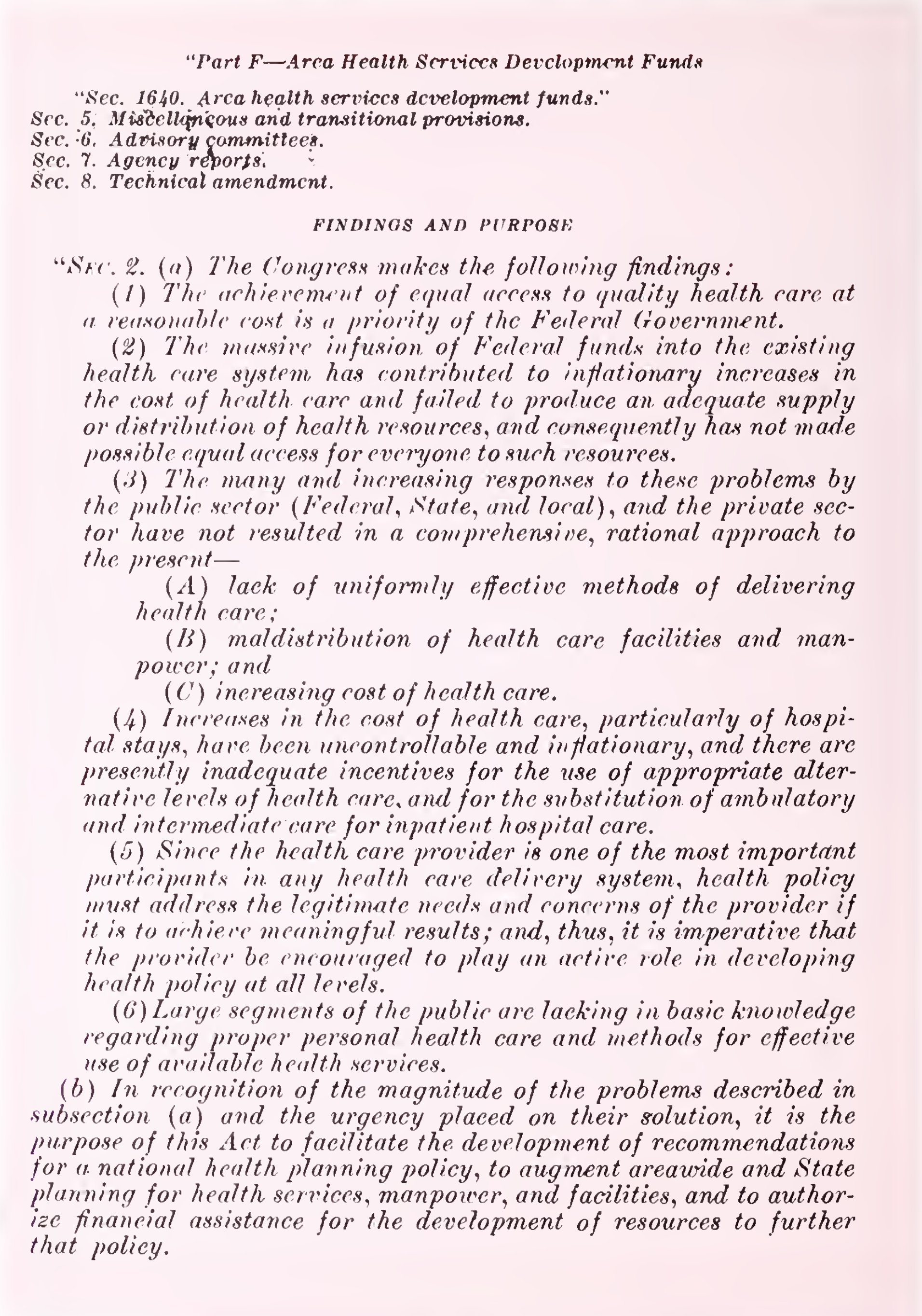

"Part F—Area Health Services Development Funds

"Sec. 1640. Area health services development funds."
Sec. 5. Miscellaneous and transitional provisions.
Sec. 6. Advisory committees.
Sec. 7. Agency reports.
Sec. 8. Technical amendment.

FINDINGS AND PURPOSE

"Sec. 2. (a) The Congress makes the following findings:

(1) The achievement of equal access to quality health care at a reasonable cost is a priority of the Federal Government.

(2) The massive infusion of Federal funds into the existing health care system has contributed to inflationary increases in the cost of health care and failed to produce an adequate supply or distribution of health resources, and consequently has not made possible equal access for everyone to such resources.

(3) The many and increasing responses to these problems by the public sector (Federal, State, and local), and the private sector have not resulted in a comprehensive, rational approach to the present—

(A) lack of uniformly effective methods of delivering health care;

(B) maldistribution of health care facilities and manpower; and

(C) increasing cost of health care.

(4) Increases in the cost of health care, particularly of hospital stays, have been uncontrollable and inflationary, and there are presently inadequate incentives for the use of appropriate alternative levels of health care, and for the substitution of ambulatory and intermediate care for inpatient hospital care.

(5) Since the health care provider is one of the most important participants in any health care delivery system, health policy must address the legitimate needs and concerns of the provider if it is to achieve meaningful results; and, thus, it is imperative that the provider be encouraged to play an active role in developing health policy at all levels.

(6) Large segments of the public are lacking in basic knowledge regarding proper personal health care and methods for effective use of available health services.

(b) In recognition of the magnitude of the problems described in subsection (a) and the urgency placed on their solution, it is the purpose of this Act to facilitate the development of recommendations for a national health planning policy, to augment areawide and State planning for health services, manpower, and facilities, and to authorize financial assistance for the development of resources to further that policy.

The findings of the new National Health Planning and Resources Development Act —PL 93-641— reproduced from page 3 of the House of Representatives' Conference Report.

successfully implemented. The Act contains specific requirements that not less than one-third of the provider members of governing boards of the health systems agencies and the state health coordinating council be direct providers of health care services. In those state and local agencies where active participation by organized medicine is sought, the profession should be responsive. In those areas where it is not sought, organized medicine should be aggressive.

The usual conclusion to this type of article is that if government and medicine join hands, they can march happily together into the promised land. In this case, there may not be a promised land and it may not always be possible to join hands, but it is essential that those most directly responsible for provision of health care services be active participants in determining the direction of the nation's health care system.

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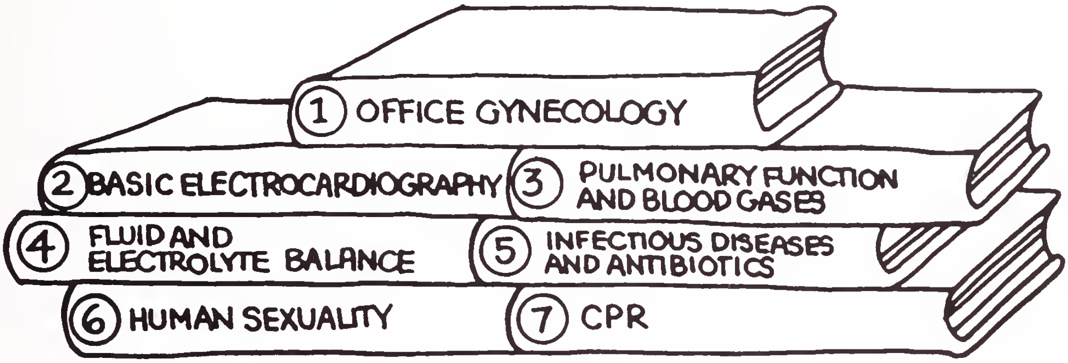
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New Planning Act Deserves Physicians' Careful Attention

By Robert E. Rice, M.D.
Greenville

Any assessment of the impact on the physician of the National Health Planning and Resources Development Act of 1974 is, of course, purely speculative at this point. It must take into consideration Professional Standards Review Organizations, which now are legislated, and national health insurance proposals, which are not now legislated.

Probably more important than any other aspect of the new act is the further encroachment by nonphysicians upon the delivery of medical care. As the two accompanying articles by authorities in the field recognize, planning of facilities and decision-making responsibilities move further away from the physician and involve a greater segment of the general public.

The physician in practice today perhaps will feel limited direct impact upon his practice, for the objectives of the act certainly are to affect the future distribution of doctors and ancillary professionals as well as capital assets. But for the new physician, or even the young man or woman recently established in practice, the potential impact is great indeed.

The Planning Act intends to manage, if not control, the number of physicians in a Health Service Area — and how they are spread throughout the area.

It intends to absolutely control the number and types of hospital beds and institutions in the HSA.

It perceives an equitable spread of manpower resources to extend full health and medical care availability to everyone.

Admirable as these objectives appear, the cost of attempting to achieve them must be measured in loss of individual rights and privileges.

Combined with PSROs, which attempt to establish a regional review of all services to patients who receive any kind of government assistance; with projected NHI programs, which will attempt to reimburse health care providers for all services, and with proposed national health manpower schemes, which will attempt to control and place trained health personnel, the National Health Planning and Resources Act may very well take over the distribution of professionals without their assent.

Doctor Rice is chairman of the MSMS Committee on Federal Legislation.

Therein lies the threat to individual doctors, and to future practitioners.

Whereas I always have held that the general public must play a role — the vital role — in determining a community's desires and aspirations for health and medical care in the community, the specter of regionalized planning with final authority resting hundreds of miles away with HEW, is sufficient for doctors to approach national planning with trepidation.

The role the general public and the government plays must be as meticulously controlled as is the role of practitioners and institutions by the planning act. Control of *services* must above all else remain outside the realm of planners and absolutely within the realm of the practice of medicine.

Physicians must maintain the decision on what treatment is indicated, by whom, and to what degree.

The only way economic control can be affected by the government is to deny services. Physicians are challenged to retain for their patients' good, the control of services.

That is why the Michigan State Medical Society's Committee on Federal Legislation recommended that Health Service Areas and PSROs be the same.

Much thought by several Michigan physicians was invested in drafting the 10 PSRO areas for our state, and that effort was recognized by HEW in using the MSMS map for PSROs.

Doctor Rice

Suddenly we are faced with new areas to plan for health services and manpower. Should the MSMS rationale be any less appropos to planning than to standard review? MSMS argued the regions should be the same. Yet, the state's proposal for HSAs badly warps the PSRO regions.

The struggle to overcome the questionable state recommendation continues, and should play little part in this discourse. Except that it emphasizes the fear appropriately resting upon practicing physicians: Does the imposition of HSAs without regard to professional standard review organizations infer future ignoring of doctor input?

I began by suggesting that any assessment of planning would be speculative. I conclude by arguing that logical speculation calls for careful attention and participation by physicians in the new federal planning law.

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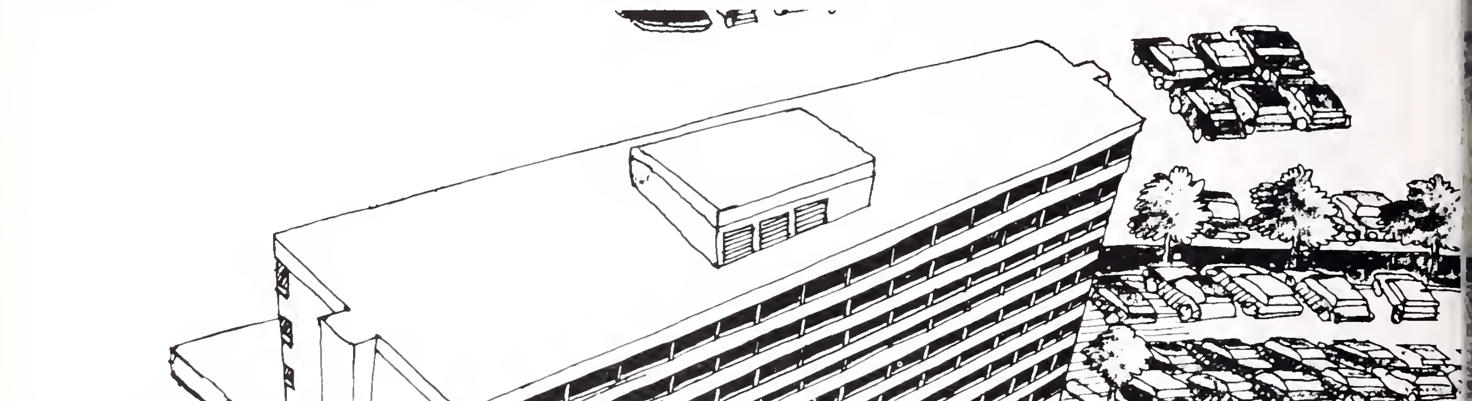

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1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.

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President's Page

Cost Now the Major Problem In Professional Liability Issue

When a very important patient is critically ill it is customary to issue daily bulletins on the progress of the illness.

The practice of medicine and the delivery of health care in this country are now afflicted with a very serious disease — that of being unable to obtain satisfactory professional liability insurance at a *reasonable cost*. Many reports and bulletins have been released on the continuing results of our efforts to alleviate this disease but because of the critical nature and urgency of the problem I would like to give you a current update.

Progress in this area is noticeable and rewarding but we still have a long way to go and the situation is as yet far from satisfactory. The legislative package which has been developed by the several interested parties, including the MSMS, the governor's office, labor and management groups, and several legislators and the Physicians' Crisis Committee is being acted upon and it appears that most of the items will become law. The main problem now is the cost of professional liability in the future, and will the public tolerate it?

The Michigan Physicians Mutual Liability Company as approved by our House of Delegates will take some time before it is operational because of the many intricacies of setting up such a company.

The contractual binding arbitration principle is gaining momentum and hopefully will be operational on Sept. 1. It is now widely accepted here what was found to be the case in England many years ago, that the present judicial system is not sufficiently knowledgeable about complicated medical problems to arrive at conclusions which would be in the best interests of the public. No malpractice case is tried by a jury there. Charges are investigated by a legal aid society — people who understand technical medical problems. The plaintiff's attorney does not share in any award; in other words, there is no contingency fee. The present court-jury system in the U.S. has forfeited its rights to act responsibly and intelligently in malpractice suits.

The Michigan Malpractice Insurance Fund has been established and is operational now. Harvey Gass, MD; Ms. Odessa Komer (UAW vice-president for Consumer Affairs) and I are holding weekly meetings with Insurance Commissioner Demlow and his staff in an attempt to make this fund practical and workable. MSMS appreciates this effort by the governor to assure coverage until the MSMS plan is operational.

I would like to again assure our membership that our staff is working overtime to seek an early removal of this blight which has so raised the cost of medical services to the public. We are monitoring other state plans and experience, and as well keeping close contact with the AMA, the American Hospital Association and HEW. Our Medigrams, journal and other informational publications will continue to highlight the developments in this unbelievable hardship which has been forced alike upon the providers of health care and the consumers of their services.

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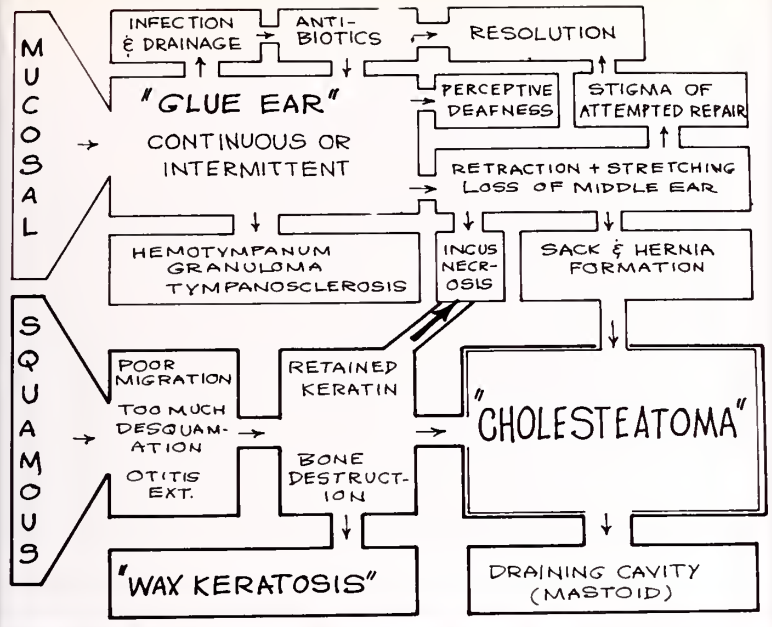
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Each of the scientific articles in this issue is prepared by physicians on the staff of William Beaumont Hospital, Royal Oak. The 711-bed comprehensive medical center last year admitted 250,000 persons and annually admits more patients than any other Michigan hospital. With major expansion projects underway, it is developing into a regional health care system. More Beaumont articles will follow in a subsequent issue of Michigan Medicine.

Tympanoplasty in Children: Some Considerations of the Pathology Encountered

By Bruce Proctor, MD
Royal Oak

Chronic inflammations and other disease processes of the middle ear cleft in children differ in some important respects from such diseases in the adult. Recognition of these differences plays an important role in their medical and surgical treatment.

Tubotympanic Disease

Two groups of chronic middle ear inflammations can be distinguished. One is benign and safe, the other progressive and dangerous. Both types may coexist. The benign form may be termed "tubotympanitis." Two types are recognized. They correspond to types I and II of Lillie. Thorburn (1965) describes them as:

1. The permanent perforation syndrome.
2. Persistent tubotympanic mucosal infection.

The Permanent Perforation

This type consists of a persistent perforation of the tympanic membrane involving the pars tensa. The margins of the perforation are completely covered with a healed epithelium. The ear may be completely dry for long periods or it may discharge intermittently. When it discharges the secretions are odorless, mucoid or mucopurulent and may be very profuse and pulsating. The mucosa in the tympanum then becomes red and edematous.

In children such ears usually discharge constantly. Diseased adenoids, chronic sinus suppuration or active allergic states must be corrected before the ear can dry and the perforation heal spontaneously. Local treatment with specific antibiotics may be beneficial. Cautery stimulation for closure is seldom possible in children. If the ear should eventually become dry and the perforation remains open in spite of a long period of quiescence it would then become advisable to do a myringoplasty after exploration of the middle ear cleft to rule out a latent cholesteatoma or disrupted ossicular chain.

Chronic Tubotympanic Mucositis (Lillie type II)

Such an ear presents a long-standing infection characterized by an odorless mucopurulent discharge which becomes very profuse with upper respiratory infections. A large and near total defect of the tympanic membrane is usually present. In children, however, the perforation may be small and anteriorly placed. The exposed mucosa on the promontory is markedly thickened and red. The ossicles are buried in this thick, exuberant and edematous mucosa. Polyps may be present as a result of marked swelling of the tympanic mucosa and these polyps may be associated with necrosis

---

Doctor Proctor is in private practice and is an associate professor of otolaryngology at Wayne State University. He is a senior consultant on the Beaumont Hospital staff.

of the ossicles or underlying portions of the temporal bone. In some of these cases, after a long period of suppuration, there is an ingrowth of epithelium around the perforation margin and into the posterior tympanum or attic producing a secondary acquired cholesteatoma.

Treatment: There is considerable variation in the bacterial flora and antibiotic sensitivity but nonetheless these studies are recommended. The appropriate antibiotic should be used for a few weeks if possible. If polyps are present they should be carefully removed under general anaesthesia under microscopic control. At that time infected adenoids may be removed and antrostomies or submucous resection done if indicated. Intensive allergy investigation and treatment may be required.

In children, surgery to the mastoid with reconstruction of sound conduction should be delayed until puberty when respiratory infections become less severe and less frequent and the eustachian tube has a larger caliber. It is hoped that with puberty the otorrhea will subside and the ear become quiescent. Only then can tympanoplasty offer any hope of hearing improvement with a dry ear. If surgery to the mastoid becomes necessary, a simple, complete, post-aural mastoidectomy, or perhaps on occasion, a modified radical mastoidectomy, should be done.

Radium therapy to the nasopharynx and eustachian tube have in the past been used to treat chronic tubotympanic mucositis with some immediate benefit. However, the evidence of radiation hazard is so great that it is no longer recommended for treatment in these cases. The results obtained with reconstructive surgery in cases of chronic tubotympanic mucositis have been poor in most cases. The disease is centered in the ciliated columnar epithelium of the eustachian tube and mesotympanum and is not directly influenced by a surgical intervention.

Attic-Antrum Disease

In contrast to the benign permanent perforation and the chronic tubotympanic mucositis, we have the progressive and dangerous attic-antrum disease. They do not have an acute and perhaps stormy onset but rather they are insidious, infiltrative and slowly destructive in their course. The predominant process is one of excessive keratin activity of squamous epithelium which invades the attic and posterior tympanum. McGuckin (1963) states that this invasive pathologic lesion originates from the meatus and is not in the strict sense a chronic otitis media. However, this migration of meatal epithelium into the attic and antrum can usually be attributed to pathologic states in the middle ear cleft which induces this invasion. In children whenever squamous epithelium invades the middle ear cleft there is a rapid extension throughout the attic, antrum and on into the entire middle ear cleft. This is probably due to the more active growth of skin in childhood when keratin formation is most rapid.

Disease confined to the attic-antrum is due to a primary acquired cholesteatoma or to congenital cholesteatoma.

Primary Acquired Cholesteatoma

These arise spontaneously and insidiously without a preceding acute otitis media. The perforation is usually confined to the region of the pars flaccida of the tympanic membrane. The characteristic feature is the presence in the middle ear cleft of keratinizing stratified squamous epithelium. The epithelial layer forms a matrix which constantly desquamates sheets of keratin. The accumulations of keratin in a confined space is called cholesteatoma.

In primary acquired cholesteatoma the eustachian tube and mesotympanum are often normally aerated and free of pathologic changes. In secondary acquired cholesteatoma there is invasion of stratified squamous epithelium through a marginal and occasionally central perforation into the middle ear (mesotympanum). A disease producing necrosis of tympanic mucosa (scarlet fever, measles, tuberculosis, acute exacerbations of chronic tubotympanitis) adjacent to the perforation may cause epithelium of the drumhead or meatus to grow over the ulcerated areas.

Congenital Cholesteatoma

A rare form of cholesteatoma can be recognized. It is not associated with the middle ear cleft and is not related to infections in the ear. It originates from the same ectoderm which forms the primitive notochord. Embryonic cell rests from this ectodermal structure may occur in any of the cranial bones. When they occur in the petrous portion of the temporal bone they may spread in and around the labyrinth and extend into the middle ear cleft or cranial cavity. If they become infected, an intracranial complication may quickly appear. The first sign which usually appears is facial paralysis. Examination usually also reveals cochleovestibular paralysis. These cholesteatomas may be of considerable size and may first be detected on radiological studies. If it is trouble-free no interference is necessary. They usually lie dormant for years. The slowly developing facial palsy together with the characteristic X-ray findings serve to differentiate a congenital cholesteatoma (epidermoid) from an acoustic neurinoma.

Occasionally the otologist observes a white mass behind an intact and normal appearing eardrum and on exploration finds a cholesteatoma. Recently a number of these have been reported as a primary cholesteatoma. Some of these cases have had a previous history of otorrhea or a tube was inserted through a myringotomy for treatment of middle ear effusion. In such cases it may be possible that squamous epithelium invaded the middle ear cleft through a perforation which subsequently healed. Oftentimes children have otorrhea without the parents noting it which resolves spontaneously. Cholesteatomas of limited extent found adjacent to the drum may be secondary acquired cholesteatomas.

We can now consider briefly the problem of chronic middle-ear cleft effusion. Blue drums, cholesterol granulomata and tympanosclerosis may be included in this group. Whenever the aero- and hydrodynamics of the middle-ear cleft are interfered with, the exudates and transudates from the mucosal lining of the mastoid air cell system are trapped. We usually think in terms of eustachian tube obstruction. However, attention is called to the significance of the isthmi tympani anticus and posticus. In these small openings from attic into mesotympanum are occluded by swollen mucosa, cholesteatoma or tympanosclerosis deposits, these exudates will accumulate above the level of obstruction. If the obstruction is correctable at surgery or if it is reversible, then the surgery can be planned for the mastoid air cell system to communicate normally again with the mesotympanum.

However, if necessary, new communications can be created in several ways. The tensor fold may be removed and often with it the tensor tendon so as to establish a passage directly from the attic into the anterior portion of the mesotympanum. In several cases of persistent effusion, with a normally functioning eustachian tube, the incus body was removed after cutting the long crus free and leaving it attached to the stapes. The drumhead can easily be shifted the short distance to the preserved long crus. By removal of the incus body, the fluids normally formed in the mastoid can once again pass into the mesotympanum. If communication is thus re-established there will not be the need to remove the mastoid cells in these nonsuppurating ears.

Another method to re-establish communications between mastoid and mesotympanum when a mastoidectomy plus preservation of the posterior bony canal wall is planned, is to remove bone from the facial recess (interval between descending facial and chorda tympani nerve), remove the facial sinus and the chordal ridge which lies between the chordal and pyramidal eminences.

Cholesteatomas extending from Prussak's space into the superior incudal space, pass over the incus body to the medial incudal space and then spread anteriorly into the anterior compartment of the attic and posteriorly into the antrum. It must always be remembered that Korner's septum (petrosquamosal lamina) may form a bony wall that would limit attic cholesteatoma to that portion of the mastoid derived from the petrosa (above and medial to the septum).

Posterior marginal cholesteatoma and also some from Prussak's space will involve the inferior incudal space and posterior tympanum. It may then pass through the posterior tympanic isthmus into the antrum. Again, if Korner's septum is intact the cholesteatoma would be placed inferolaterally below the septum. It is important to be aware of Korner's septum in order to avoid injury to the facial nerve. This can happen because Korner's septum may be mistaken for the middle fossa dural plate.

As these cholesteatomas progress they continue to discharge so that there is no increase in pressure and no pain. The bone necrosis is not due to pressure from a cholesteatoma but rather to the presence of bacteria in the cholesteatoma plus possible enzymatic or chemical changes. Progression is also associated in time with obstruction to the ventilation of the antrum and mastoid air cells. These cells continue to pass fluid (exudates and transudates) which cannot escape so they become more concentrated and irritating and lead to the stimulation of cholesterol granulomas or to condensations of the hyalin material which we now call tympanosclerosis.

Conclusions

In a short space an attempt has been made to cover the subject of chronic otitis media and mastoiditis. Much is still unknown about the inflammatory diseases in the middle ear cleft. Very little is known concerning the physiology of the eustachian tube. Our knowledge of pathology in this area is far from complete. Effusion, cholesterol granulomas, the nature and behavior of keratin are incompletely understood.

The ramifications of these fascinating changes which are observed in the middle ear were discussed at a seminar in Detroit in 1966. A working guide for these discussions was presented by R. Thomas (1967) now of York which is presented on the first page for your consideration and for your future reference.

The "mucosal" factor indicates disease of the lining of the middle ear cleft, associated with dysfunction of the pressure equalizing mechanism and with retention of exudates which would normally escape into the nasopharynx. The "squamous" factor means that there is or has been failure of the escalator mechanism (or migration) within the external auditory canal. Retention of the products of desquamation is accepted as a cause of dissolution of the underlying tissues and particularly of bone. The mucosal factors seem to predominate in childhood. Some such system is invaluable as an aid for clarification of the course that any given diseased ear may take with or without medical or surgical treatment.

MEETINGS

July 9-10, Aug. 6-7, Sept. 10-11 – Professional Activity Study Tutorial Sessions for hospital personnel, sponsored by Commission on Professional and Hospital Activities, at CPHA headquarters, contact: CPHA, 1968 Green Road, Ann Arbor, 48105.

July 14-18, Aug. 11-15, Sept. 15-19 –Advanced Techniques for the Health Record Analyst, for practicing analysts, sponsored by Commission on Professional and Hospital Activities, at CPHA headquarters, contact: CPHA, 1968 Green Road, Ann Arbor, 48105.

July 24-25 — Annual Coller-Penberthy-Thirlby Medical Conference, Park Place Motor Inn, Traverse City, contact: Laurence P. Skendzel, MD, Munson Medical Center, Traverse City, 49684.

July 26-27 – AMA Regional Continuing Medical Education Courses, Minneapolis, contact: CME Circulation and Records Dept., AMA, 535 N. Dearborn, Chicago, 60610.

July 31-Aug. 3 – Summer Meeting, Michigan Psychiatric Society and Michigan Psychoanalytic Society, Park Place Motor Inn, Traverse City, contact: Sidney Bolter, MD, Meeting Chairman, 16001 W. Nine Mile Road, Southfield, 48075.

Aug. 2 – The Council, Bay Valley Inn, Bay City, contact: Warren F. Tryloff, MSMS director.

Aug. 9-13 – Annual meeting and scientific assembly, Michigan Academy of Family Physicians, Park Place Motor Inn, Traverse City, contact: Rita Feldkamp, executive secretary, MAFP, 933 Wing St., Plymouth, 48170.

Aug. 22-24 – Second Annual Regional Meeting, International College of Surgeons, North Detroit General Hospital, contact: Meyer O. Cantor, MD, North Detroit General Hospital, 3105 Carpenter, Detroit, 48212.

Sept. 10 – Continuing Medical Education Course, "Hypertension — Detection and Control," sponsored by medical schools at University of Michigan and Michigan State University, and CIBA Pharmaceuticals, at Park Place Motor Inn, Traverse City, contact: Robert Daugherty, MD, 238-A Life Sciences, College of Human Medicine, MSU, East Lansing, 48824.

Sept. 13 – September Seminar, "Pathology of the Breast," Michigan Society of Pathologists, St. John Hospital, Detroit, contact: Robert Hendrix, MD, Department of Pathology, University of Michigan, Ann Arbor, 48104.

Sept. 17 – Annual Muskegon Trauma Day, Holiday Inn, Muskegon, contact: G.W. Annessa, MD, 1470 Peck St., Muskegon, 49441.

Sept. 24 – The Council, MSMS headquarters, contact: Warren F. Tryloff, director.

Sept. 25-27 – Postgraduate course, "Implant Surgery for Joints and Tendons in the Hand," sponsored by American Society for Surgery of the Hand, at Blodgett Memorial Hospital, Grand Rapids, contact: Alfred B. Swanson, MD, course chairman, 313 Blodgett Medical Building, Grand Rapids, 49506.

Sept. 30 – Annual Surgical Symposium of WSU and Children's Hospital departments of surgery, at Children's Hospital, contact: Maggie Stiegler, director, Department of Community Relations, Children's Hospital of Michigan, 3901 Beaubien Blvd., Detroit, 48201.

Oct. 8-9 – Joint meeting, MSMS Committee on Maternal and Perinatal Health, Michigan Society of Ob-Gyn, and Perinatal Association of Michigan, at MEA Conference Center, St. Mary's Lake, Battle Creek, contact: Helen Schulte, MSMS headquarters.

Oct. 9-10 – 1975 Mack Symposium on Physiology and Pathology of Reproduction, sponsored by WSU Department of Ob-Gyn and C.S. Mott Center for Human Growth and Reproduction, at Engineering Society of Detroit, 100 E. Farnsworth, Detroit, contact: Kamran S. Moghissi, MD, Scott Hall, WSU, 540 E. Canfield, Detroit, 48201.

Nov. 5 – MSMS Council, MSMS headquarters, contact: Warren F. Tryloff, director.

Nov. 11-13 – 1975 MSMS Annual Scientific Meeting, Michigan Inn, Southfield, contact: Helen Schulte, MSMS headquarters.

Nov. 29-Dec. 4 — AMA Clinical Convention, Honolulu.

Dec. 13 – December Seminar, Michigan Society of Pathologists, at The U-M, contact: Robert Hendrix, MD, Department of Pathology, University of Michigan, Ann Arbor, 48104.

Adrenal Venography in Virilizing Syndrome

By J. Farah, MD
R.B. Leach, MD
N.E. Young, MD
P.F. Varley, MD
Royal Oak

Adrenal venography has proven to be an important and accurate roentgenographic method for evaluation of morphologic changes of the adrenal glands. The normal adrenal can be differentiated from hyperplasia and tumor in the majority of cases, resulting in better selection of treatment method. The purpose of this study is to correlate the results of baseline urine steroids with anatomical changes visualized in the adrenal venogram.

Material

Adrenal venography results were reviewed on 100 recent consecutive cases of "virilized" females admitted to the William Beaumont Hospital. Patients included in this study all presented with varying severity of virilizing syndromes, evidenced clinically by male hair distribution, menstrual irregularity, acne and obesity. All of the patients were white and ranged in age from 14 to 59 years with a mean age of 25 years. Weight ranged from 107 lbs. to 228 lbs. with a mean weight of 164 lbs.

Procedure and Methods

Laboratory analysis of the 24-hour urine collections were made utilizing the Zimmerman reaction for 17 ketosteroids (17 KS, normal 6.5 mg/24 hr.), the Glenn-Nelson procedure for evaluation of 17 hydroxycorticosteroids (17 OHS, normal 2-6 mg/24 hr.), and the Wilson method of determining 17 ketogenic steroids (17 KGS, normal 3-15 mg/24 hr.). Twenty-five units of ACTH was administered in 500-700 cc. of glucose over an 8 hour period, 750 mg. of Metopirone was given every four hours for six doses and 0.5 mg. of Dexamethasone was given every six hours for three days.

Adrenal venography was performed on all of these patients utilizing Seldinger's technique of percutaneous transfemoral vein catheterization.[5] Pre-formed, thin-walled 6 French Kifa catheter was utilized for the left adrenal venogram. For the right adrenal venogram, a special pre-formed 7F green catheter, designed by one of us[1] was utilized *(Fig. 1)*. One to six cc. of iodinated contrast material, Renografin 76% was injected into the adrenal veins, the amount varying with the size of the gland and the degree of occlusion by the catheter of the ostium of the vessel. Serial roentgenograms were made at the rate of two per second for six seconds. On the left side, in addition to the AP view, a left posterior oblique view was also obtained. The addition of this view was extremely

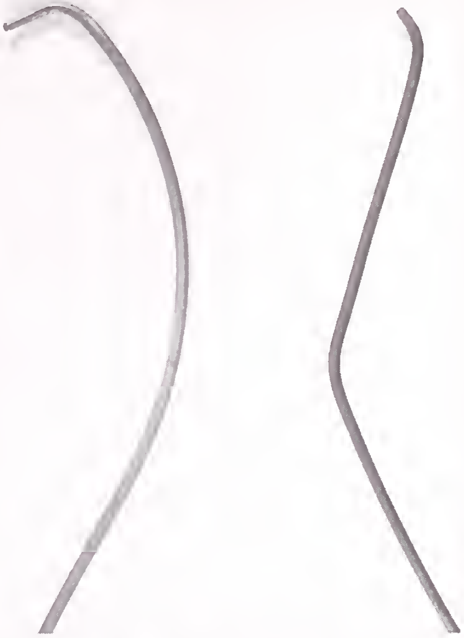

Fig. 1. Right adrenal catheter   Left adrenal catheter

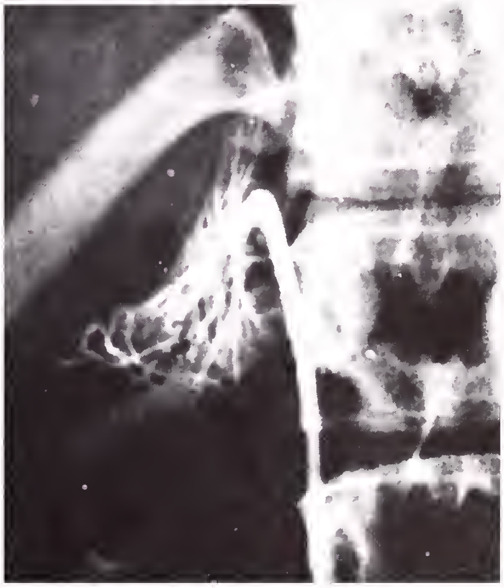

Fig. 2-A. Right adrenal venogram.

Doctor Farah is in diagnostic radiology and Doctor Leach is in endocrinology at William Beaumont Hospital. Doctors Young and Varley are former diagnostic radiology residents at the hospital.

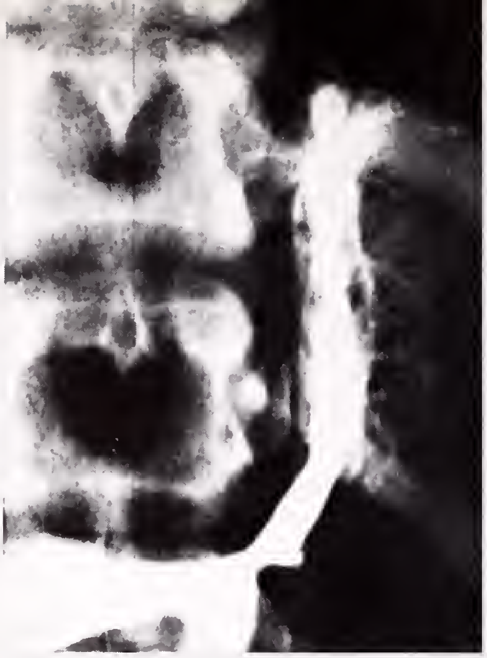

Fig. 2-B. Left adrenal venogram, AP.

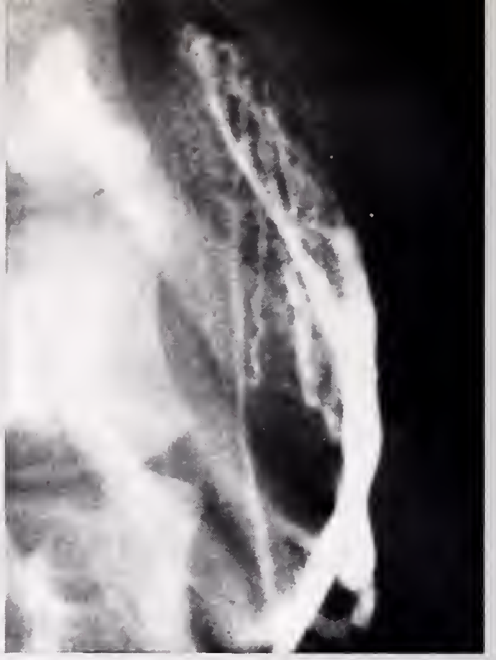

Fig. 2-C. Left adrenal venogram, LPO.

helpful in demonstrating an adrenal mass in at least two cases which otherwise would have been missed on the AP view only.

Interpretation of the Venographic Findings

A. Normal

Normal venous pattern of the adrenal gland is illustrated in **Figures 2-A, B, C.** A large central vein is seen lying along the longitudinal axis of the gland. Multiple small branches enter the central vein in an oblique fashion, a so-called "elm-leaf" pattern. Several small venous channels, or emissary veins may be located at the surface of the gland and occasionally one of these is noted to be of large size as an anatomical variant. On the left side, the central vein empties into the renal vein after joining with the inferior phrenic, renal and adrenal capsular veins. On the right side, the pattern is somewhat more variable with the central vein usually emptying directly into the inferior vena cava. Occasionally, this may empty into a small hepatic vein or even into the right renal vein.[2,3,5]

Glands were considered to be normal when the measurements were approximately 5.5 cms. by 2.5 cms. on the left and 5.0 cms. by 1.5 cms. on the right and having the typical "elm-leaf" appearance. Unfortunately, the size of the normal adrenal gland varies with the patient's weight and, therefore, this is subject to modification.

B. Hyperplasia

The evaluation of a hyperplastic adrenal gland by venography is quite subjective and for this reason we have chosen to examine our recent cases with the view that past experience has made us more accurate in our interpretation. Diagnosis of hyperplasia was made not only by the larger size of the gland but also by prominent appearance of the venous pattern. **(Fig. 3).**

CASE NO. I This 24-year-old white female started menstruating at age 14 and developed pubic hair at the age of 12. Her menstrual cycles were irregular from menarche, averaging 35-45 days, occasionally skipping a cycle. She developed acne at age 15, moderate hair around the mouth, worse over the last year. The only significant family history is that of grandmother having diabetes. Physical examination revealed mild hirsutism of the upper lip, chin and periareolar area. Some dark hair was evident over the mid-abdomen following the linea alba. The clitoris was of normal size.

	U/17 KS	U/17 OHS	⅞/17 KGS	*Pl/Androstenedione	**Pl/Testosterone
Baseline	25 mg/24 hr.	10 mg/24 hr.	14 mg/24 hr.	360 Ng/%	0.04 mcg.
Metopirone	50 mg/24 hr.	40 mg/24 hr.	54 mg/24 hr.		
ACTH	55 mg/24 hr.	48 mg/24 hr.	60 mg/24 hr.	600 NG/%	0.07 mcg.
Dexamethasone	5 mg/24 hr.	2 mg/24 hr.	7 mg/24 hr.	120 Ng/%	0.03 mcg.

* Normal 90-280 Ng/%

**0.00 - 0.10 mcg.

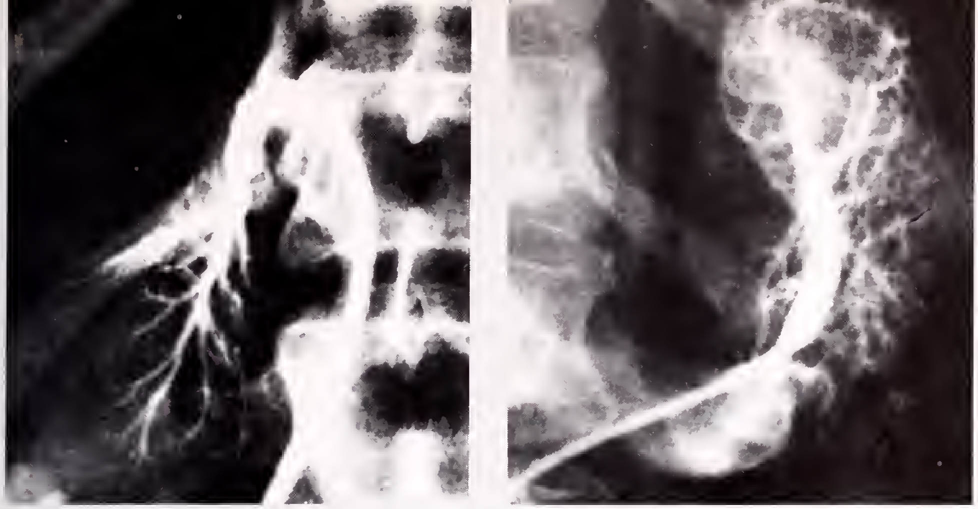

Fig. 3. *Case I.* Adrenal venogram showed enlarged right and left adrenal glands, measuring 9 x 3.5 cms. in their greatest diameter with prominent venogram pattern.

Five hour glucose tolerance test showed fasting — 94 mg.%, ½ hr. — 180 mg.%, 1 hr. — 195 mg.%, 2 hr. — 150 mg.%, 3 hr. — 130 mg.%, 4 hr. — 110 mg.%, 5 hr. — 90 mg.%. Karotype XX. Plasma cortisol was 27mcg/100 ml. in the morning and 29 mcg/100 ml. in the evening.

C. Tumors

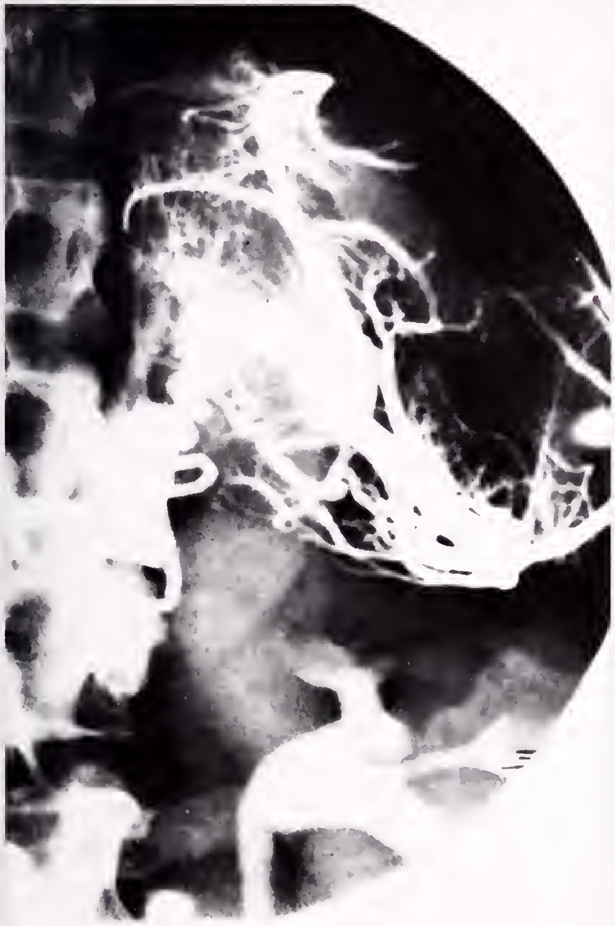

Fig. 4. *Case II.* Adrenal venogram showing large mass arising from the left adrenal gland with markedly dilated venous pattern. Right adrenal venogram was normal.

Adenomas are identified as space-occupying lesions of varying size causing stretching and displacement of adjacent veins. Veins over the tumor may be dilated with some staining of varying degrees **(Fig. 4. Case II.)**

CASE NO. II. This 22-year-old married, nulligravida, white female was admitted with complaints of oligomenorrhea since her menarche at age 13, hirsutism, which had always been present to a mild degree. Hair growth became more severe during the past year and involved the chest, abdomen and face. She also complained of oily skin, intolerance to cold.

Urinary 17-KS level of 48 units was recorded in May of 1971. On physical examination, she presented with hirsutism of the face, chest, abdomen and anogenital regions. The clitoris was somewhat hypertrophic. There was no galactorrhea. Laboratory studies included a normal SMA-6, SMA-12, CBC and glucose tolerance test. Urinalysis and pregnancy test were negative. Cholesterol was 91 mg/100 ml. Plasma cortisol was 29 mcg./100 ml. in the morning and 16 mcg./100 ml. in the evening. Baseline serum FSH was 495 units and LH 2.2 units. Urinary estrogens were 0.4 mg/24 hr. The baseline plasma testosterone was 0.14 mg/24 hr.

Following the first day of Metopirone stimulation, the 17 KS were 240 mg/24 hr, 17 OHS 6.4 mg/24 hr. and 17 KGS 20.1 mg/24 hr. Metopirone #2 revealed 17 KSof 205.6 mg/24 hr, 17 OHS 12.6 mg/24 hr. and 17 KGS 31.1 mg/24 hr. With ACTH stimulation, the 17 KS were 207 mg/24 hr., OHS 27.5 mg/24 hr. and KGS 64.6 mg/24 hr. Following Dexamethasone suppression, the KS were 463 mg/24 hr., OHS 2.4 mg/24 hr. and KGS 18.9 mg/24 hr. A pelvic pneumogram showed a normal uterus and bilaterally small ovaries. Chest and skull x-rays were negative. T-3 resin uptake and T-4 tests were normal. Radioactive iodine uptake and scan of the thyroid were also normal. The right adrenal venogram was normal. The left adrenal venogram showed a large 6 cm. by 10 cm. mass arising

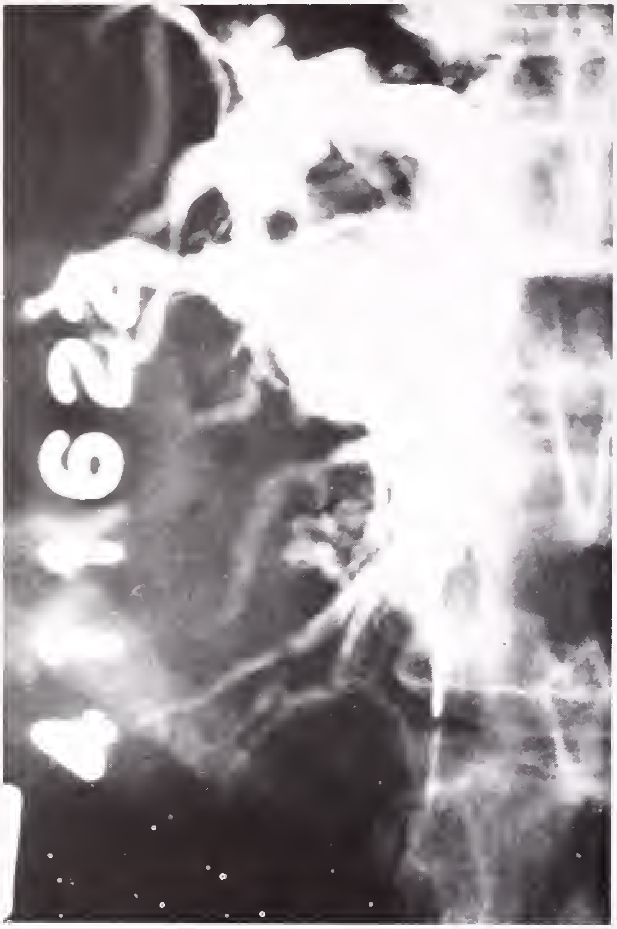

Fig. 5. *Case III.* Adrenal venogram showing large mass arising from left adrenal gland with markedly dilated irregular and tortuous veins. Right adrenal venogram was considered to be normal.

from the left adrenal gland as outlined by numerous distended vessels. Surgical removal of the mass showed it to be an adrenal adenoma (190 Gm.), **(Fig. 4).**

Carcinoma produces an abnormal vascular pattern with a greater abundance of dilated, tortuous, irregular vessels **(Fig. 5. Case III).**

CASE NO. III. A 33-year-old white female gravida 3, para 2, abortion 1, presented with complaints of acne, amenorrhea and hirsutism. High baseline KS values of 49.5 mg/24 hr. were reported and a subsequent Metopirone test showed a fall instead of a rise. She received an ACTH test and her KS level instead of increasing decreased to 32.7 mg/24 hr. After Dexamethasone, her KS level instead of suppressing increased to 61.4 mg/24 hr. The patient had a left adrenal venogram which showed numerous dilated tortuous veins in a large mass arising from the left adrenal gland. The right adrenal gland was normal, measuring 5 cm. × 1.5 cm. At surgery the tumor was found to be an invasive adrenal cortical carcinoma.

Results

Left adrenal catheterization was successful and yielded satisfactory studies in 97% of the patients. On the right side, with the advent of the new catheter, satisfactory studies were obtained in approximately 85% of the cases.

Adrenal hemorrhage occurred in two cases. The severe abdominal pain necessitated continuing sedation for 18 hours with gradual relief thereafter.

The patients were considered to have abnormal studies if either adrenal gland was abnormal. However, patients were included in the normal category for statistical purposes if only one gland was examined and was found to be normal. Seventy-five per cent of the patients examined were felt to have normal adrenal venograms. The remaining 25% had abnormal adrenal studies which were interpreted as either hyperplasia or space-occupying lesions. Of the normal 75 patients, only nine cases demonstrated entirely normal urinary steroid values. Thirty-eight cases, or 51% of the 75 patients, demonstrated abnormalities in all urinary parameters evaluated **(Table 1).**

On the other hand, approximately 60% of those with abnormal adrenal venograms had elevated KS, KGS and OHS.

Table II shows the number of patients with all different combinations of steroid abnormalities as correlated with abnormal adrenal venograms.

TABLE I.
24 Hour Urine Collections

	Normal	Elevated KS KGS OHS	Elevated KS KGS	Elevated KGS OHS	Elevated KS OHS	Elevated KS	Elevated KGS	Elevated OHS
Normal Adrenal Venograms (75 patients)	11 (14%)	38 (51%)	5 (7%)	12 (16%)	-0- -0-	1 (1%)	3 (4%)	5 (7%)
Abnormal Adrenal Venograms (25 patients)	3 (12%)	15 (60%)	1 (4%)	2 (8%)	3 (12%)	-0- -0-	1 (4%)	-0- -0-

(KS — KETOSTEROIDS, KGS — KETOGENICSTEROIDS, OHS — HYDROXYSTEROIDS)

TABLE II.			
Elevated Urine Values	Number of Patients	Number with Abnormal Venograms	Per Cent of Total
KS	65	19	29%
KGS	77	19	25%
OHS	77	21	27%
KS, KGS	59	16	27%
KS, OHS	58	19	33%
KGS, OHS	67	18	27%
KS, KGS, OHS	53	16	30%
Normal	12	3	25%

Note that the percentage of patients with abnormal venograms in each of these categories is almost identical. **Fig. 6** shows correlation of the percentage of abnormal adrenal venograms with the degree of elevation of the three major baseline steroid levels.

Abnormal adrenal venograms would account about 15-25% of the total patients with normal range of values as indicated by the graph.

As we progress to the abnormal range, it is noted that in all of these cases, the abnormal venograms tend to account for approximately 50% of the total. This would indicate a significant correlation. However, the number of patients at these levels is rather small as seen on the graph, and therefore, definite conclusions in this respect cannot be drawn.

The number of tumor cases in this series was small. Space-occupying lesions were noted in only five patients. In two of these cases, the clinical and chemical data did not appear to support the diagnosis of an adrenal tumor and surgery was not performed. The third case proved to be a "false positive" since the adrenal venogram showed a possible tumor, and at surgical exploration was found to be normal. The fourth case, a large adenoma and the fifth case, a large carcinoma, were proven at surgery. In our two tumor cases, the opposite adrenal gland appeared to be of normal size.

Conclusions

One hundred cases were examined in an attempt to correlate adrenal venographic findings with 24-hour urine collections for 17 KS, 17 OHS and 17 KGS.

Poor correlation between the degree of virilization with urinary 17 KS levels had been recognized in the past.[4] Our experience coincides with that of Reuter et al[3] in that some of the normal patterns showed marked virilization and elevated 17 KS levels and a few patients with normal KS levels had had hypertrophied adrenal glands, showing lack of correlation between adrenal venogram findings and degree of virilization.

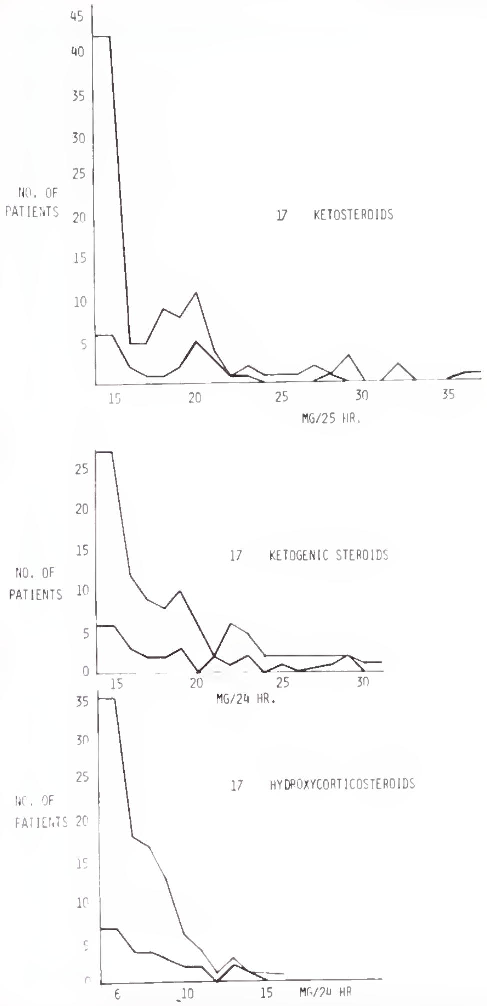

Fig. 6. The upper line indicates the total number of patients with the particular steroid level indicated on the abscissa. The lower line on the graph indicates the number of patients in this category with abnormal venographic studies.

We feel that the greatest value of adrenal venography is in severly virilized patients with elevated 17 KS with no suppression or paradoxical response after administration of Dexamethasone.

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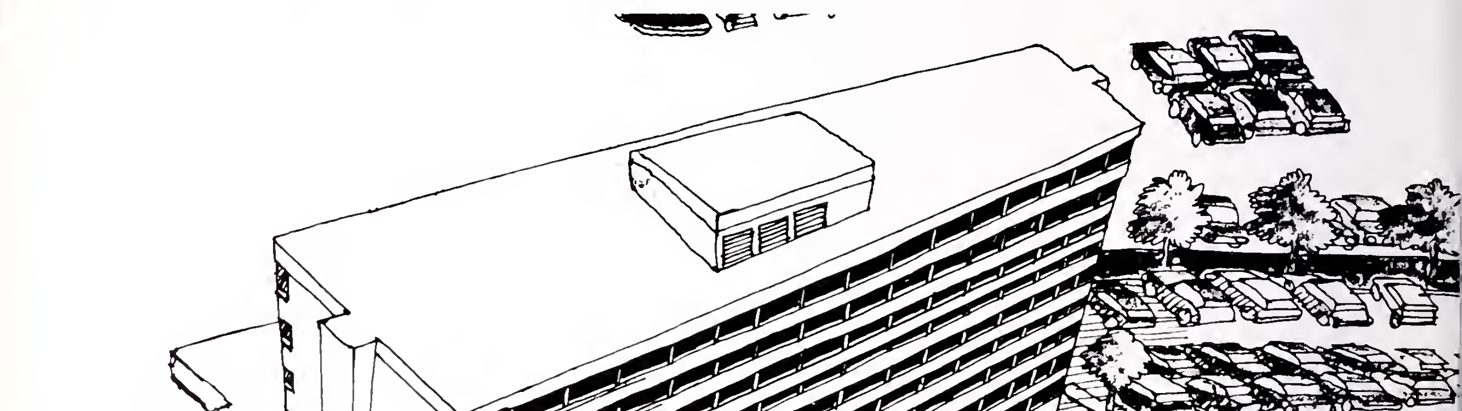

IT'S NEW

Michigan Inn, Southfield

Some Neuromuscular Aspects Of Thyroid Disease – A Sampling and Discussion

By J. Dana Darnley, M.D.
Royal Oak

For reasons not yet clear, the neuromuscular system is frequently prone to malfunction in settings of thyroid disease — particularly, hyperthyroidism and hypothyroidism, but rarely even with thyroiditis.

At times, the neuromuscular symptoms and signs may be the presenting features or may so dominate the clinical picture as to obscure somewhat the familiar and classic signs of thyroid dysfunction.

It behooves us, then, as clinicians, to recognize the neuromuscular symptom-complex as a mask for an eminently treatable lesion, thyroid disease. The reward for same will be, almost without exception, control or cure of the basic disease process and elimination of the neuromuscular deficits as well.

Within the past year, three office patients were seen in neurological consultation for respective chief complaints of: Weakness, fatigability, and slowness (Case 1); weakness and tremor (Case 2); leg paresthesiae, weakness and clumsiness (Case 3). In each instance, thyroid disease was the 'generator'; in each instance, appropriate therapy for the thyroid disturbance cleared the whole problem.

Case Reports

Case #1: W. W., a 54 year old man, was referred as a "possible amyotrophic lateral sclerosis." For one or two years he had been fatigued, "slowed up," weak. His muscles were "sore," especially calves and thighs; speech was slurred for two weeks about four months prior to this consultation and had become more slurred two months prior to the visit, but then slowly improved. He had become unreasonable and irritable, according to his wife (he blamed this on fatigue); he recognized greater emotional liability and a "new" sensitivity to cold, especially fingers and toes, the former turning "chalk-white" and getting very numb. Skin was described as exceedingly dry with eyes "dry and burny" for a year or two.

Neurological examination showed an alert, normally intelligent man, who spoke slowly in a deep voice and moved slowly and deliberately. Speech was slurred, rarely. Skin was dry, wrinkled, and burnished. Hands and feet were cold, pulse slow, tongue large, and facies dull. There was no evidence of cranial neuropathy or bulbar signs.

There was marked myotatic irritability of arm and leg muscles (myoedema), but no fasciculations, atrophy, weakness, muscle or nerve trunk tenderness. There was suggestive slowing of the relaxation phase of Achilles tendon reflexes on both sides, but stretch reflexes were otherwise normal. There were no pathologic reflexes. There was moderate vibration sense loss on the toes of the left foot, but no other sensory deficit.

There was mild to moderate ataxia of arms and legs and the patient's gait was slow, loping, but the Romberg test was negative. There was no myotonia.

Laboratory work (performed up-state, prior to consultation) had been within normal limits except for hypercholesterolemia (388 mg% and 496 mg% on consecutive days).

Thyroid therapy, up to 4 grains daily, was started by the patient's own physician up-state (Dr. Cosens, Bay City, Michigan) after thyroid function tests showed: PBI — 3.7 mcg%; T3 — 35%; FTI — 1.30[1]. Within three weeks the patient was "no longer tiring easily, muscles not aching as before, has a lot more ambition and energy."

Follow up laboratory studies included: PBI — 4.6 mcg%; T3 — 44%; FTI — 2.02 six weeks after treatment started. Three months later the results were: PBI — 4.8 mcg%; T3 — 37%; FTI — 1.78, and at that time the serum cholesterol had dropped to 242 mg%.

Case #2: C. S., a 59 year old man, was referred for evaluation of excessive fatigue and fatigability, bilateral hand tremor, "nervousness," 30-pound weight loss, difficulty swallowing, excessive sweating, fluctuation in voice quality, and occasional "pins and needles" in the medial three fingers of each hand. Insomnia had also become a problem and the present illness had begun about six or eight months prior to the consultation. There were no other relevant points in the past history and the family history was negative except for supposed Parkinsonism in the patient's father.

Neurological examination showed an alert, intelligent gentleman who seemed at times a bit

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Doctor Darnley is Chief, Division of Neurology, William Beaumont Hospital.

hoarse. There was no dysarthria or fatigability of speech and no sign of cranial neuropathy or bulbar deficit. Neck flexion was a bit weak. There was symmetric and mild to moderate weakness of hand grip, intrinsic hand muscles, wrist extension, elbow flexion and extension, and quite marked weakness of shoulder abduction; there was very marked symmetric weakness of hip flexion and lesser weakness of knee flexion symmetrically. There was suggestive atrophy of the anterior shoulder and upper pectoral muscle groups and of the first dorsal interossei. There were no fasciculations. Stretch reflexes were symmetrically hyperactive, but there were no pathological reflexes. There was no ataxia and no sensory deficit.

The hands were warm and slightly moist. There was a fast, slightly coarse tremor of the extended hands, accentuated by repeated flexion-extension of the fingers. A small substernal goiter and onycholysis were noted (Dr. Yanez, endocrinologist); heart rate was at 100 per minute and regular; blood pressure 140/60 mmHg. PBI — 13 mcg%; T4 — 16.3 mcg%; FTI — 1.87; 24 hour thyroid uptake — 44.6% (10 to 40% normal range). Thyroid scan revealed diffuse enlargement, approximately 40 gram size; no hot or cold nodules. Serum cholesterol — 170 mg%; antithyroid globulin titer — 64 (normal less than 32). Barium swallow showed no extrinsic pressure on proximal esophagus. CSF was normal — 2 WBC, protein 22 mg%. Routine laboratory studies, including chest x-ray, were within normal limits. EKG normal except for left anterior hemiblock.

A diagnosis of Graves' disease with thyrotoxic myopathy was made and the patient was given 7.0 mCi of I-131 orally (as the sodium iodide) — after an overnight fast. Within two or three months, the patient's general health and, more specifically, his neuromuscular state, were rapidly approaching normal and after six to nine months, he was again perfectly normal and energetic as ever.

Case #3: M. L. , a sixty-one year old woman, was referred as "probable neurological disorder." Her present illness began about nine months earlier with painful parasthesiae in both legs (up to the hips), hypersensitivity of both feet, weakness of both legs, "numbness and tingling" of all fingers, and a general loss of pep. All symptoms were slowly progressive. In response to specific questions, she reported that hair and skin had become "dry as a bone" in contrast to their normal status six to 12 months before. The balance of the neurological system review was unrewarding. There was mild diabetes for which the patient took no medication and followed no specific diet.

When asked about thyroid disease, she reported having been told she had a "goiter" at the University Hospital, Ann Arbor, 45 years ago; she had been on thyroid therapy from that time until four years ago when it was stopped in the setting of her anxiety and depressive reaction at the time of her husband's death.

Neurological examination showed a pallid, weary woman, clearly chronically ill. She was heavy-lidded, puffy-faced, and had coarse hair and dry, cool skin. Her voice was low, her speech slow, and occasionally slurred. Her tongue was a bit large. She was, however, generally fully alert and seemed possessed of normal intelligence. The neuro-ophthalmologic examination was normal and there was no sign of cranial neuropathy. There was symmetric, hypotonic quadriparesis, the legs more involved than the arms. Specifically, abduction at the shoulders, extension at the wrists and fingers, and abduction of the fingers were all moderately weak, but there was particularly marked weakness of hip flexion, complete bilateral foot drop, and moderate weakness of knee flexion; this was all bilateral and symmetric. There was slight hyporeflexia in the legs with obviously prolonged relaxation phase of the Achilles tendon reflex bilaterally. The patient's gait difficulty was quite marked and appeared due primarily to the leg weakness rather than ataxia; there was slight dysmetria in the arms, however. There were vibration sense deficits in all toes, no other sensory deficits; there was bilateral calf tenderness, but no Tinel's sign over any peripheral nerve.

The diagnosis of myxoedema with myxoedematous neuromyopathy was made.

Routine laboratory studies were within normal limits, but CSF protein was elevated to 156 mg% while CSF cell count was normal (1 WBC)[1]; T4 — 0.0 mcg% and FTI — 0.64.

Appropriate thyroid therapy was started (Dr. Yanez) and slow, but steady, return to normal general and neuromuscular status has followed to the present time, an interval of six months.

Discussion

The relatively rare incidence of myasthenia gravis or periodic paralysis with thyrotoxicosis, and of cerebellar ataxia with myxoedema is beyond the scope of this discussion. Our emphasis will be on some of the general neuromuscular features of functional thyroid disease.

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1. Normal values —
   PBI = 4-8 mcg/100 ml.
   T3 = 0.82:1.18
   FTI = .87:1.29

   Serum cholesterol = 150-250 mgc/100 ml.
   T4 = 5-12 mcg/100 ml.
   CSF cells = 0-8 WBC
   CSF protein = 25-50 mcg/100 ml.

In almost all thyrotoxic patients, some degree of weakness and fatigability is to be expected, but the chronic myopathy of thyrotoxicosis is characterized by moderate atrophy (shoulder girdle, intrinsic hand muscles) and weakness (proximal limb muscles, particularly extensor groups), sometimes increased stretch reflex activity, frequently shortened relaxation phase of Achilles tendon reflexes, sometimes coarse fasciculations on movement (not present at rest), and often tremor, but no other neurological signs. This picture is most often seen in middle-aged men, not uncommonly in masked hyperthyroidism — at least, without the classic eye signs. Weight loss and anxiety may have been noticeable for some time, but this is not consistent.

The differential diagnosis would have to include progressive muscular atrophy and polymyositis. The former can generally be excluded by the presence of prominent muscle fasciculations at rest and the greater degree of atrophy and weakness, often with hyporeflexia; in progressive muscular atrophy not infrequently bulbar signs develop, pyramidal tract signs may become prominent (amyotrophic lateral sclerosis), and the EMG picture is one of anterior horn cell degeneration. Polymyositis could pose a differential problem, but the sedimentation rate, muscle biopsy, serum enzyme studies, (CPK, SGOT, aldolase), and probably EMG should tell the tale — i.e., sedimentation rate and enzymes much higher with polymyositis and muscle biopsy with polymyositis at least standing some chance of showing an inflammatory response. The EMG should be of value here, too, though less specific.

The EMG in thyrotoxic myopathy has shown some abnormalities, but nothing diagnostic. Similarly, muscle biopsy, even of clinically involved muscles, has been non-specific — anything from normal to a blend of mild atrophy with inconsistent fatty infiltration. A report of seemingly specific subsarcolemmal semilunar bodies (mucopolysaccharide-containing) detected by special staining techniques has not been confirmed. There is no structural abnormality in the central or peripheral nervous system or the myoneural junction and the sarcolemma (muscle membrane) is apparently normal.

Creatinuria and decreased creatine tolerance are, of course, a cardinal feature of thyrotoxic myopathy, probably reflecting "leakage" from the affected muscle plus decreased storage and utilization of creatine. Reduced creatine and phosphocreatine content of muscle is another familiar part of the picture.

Some biochemical abnormality of the muscle sarcoplasm is suspected to be the 'culprit.' The abnormality is felt to be subcellular or molecular since complete functional recovery occurs regularly with appropriate antithyroid therapy.

An interesting and plausible theory about this biochemical abnormality — not yet confirmed, by the way — is based on the apparent T4 (thyroxine) effect of "uncoupling" oxidative phosphorylation, the source of high energy phosphate bonds, such as ATP, an absolute "must" for muscle function. Thyroxine-induced dissolution of these bonds would theoretically account for muscle weakness. Another interesting point — this "coupling" is an enzymatic function of muscle mitochondria, which happens to be more abundant in red muscles. Red muscle fibers are found chiefly in extensor muscles, which, by coincidence (?) just happen to be the ones preferentially affected in thyrotoxic myopathy. This would certainly seem a reasonable and stimulating line of thought — but not yet confirmed.

As indicated above, appropriate anti-thyroid therapy, just as in the single case of thyrotoxic myopathy reported herein, regularly effects a favorable response and cure.

On the other side of the thyroid 'coin' — viz., hypothyroidism — neurological complications are considerably more varied, though pure muscular disorder is more prominent. As far back at 1897, Hoffman described the clinical picture of painful spasms and pseudomyotonia in a setting of hypothyroidism in adults and in 1935 Debre-Semelaigne described the Herculean muscle development of very young cretins. Enlargement of muscles, particularly the tongue, arms, and legs, is reportedly common; in our two recent cases, just the tongue seemed large. The slowness of contraction (and relaxation) matches the usual slowness of speech and thought and was quite evident in our patients.

Myoedema or myotatic irritability, but no myotonic responses of contraction or percussion type, were evident in our first patient. The pseudomyotonia of hypothroidism, incidentally, differs from true myotonia in that in pseudomyotonia the slowness is evident in contraction as well as in relaxation, is no worse after rest, is not improved by exercise nor by quinine, and is electrically "silent" on EMG — all in distinct contrast to true myotonia.

The clinically evident showing of the relaxation phase of the Achilles tendon reflex has been abundantly described in the literature and repeatedly validated by measurement of the so-called half-relaxation time (HRT). For instance, in a recent study, the mean HRT for 64 non-diabetic patients with hypothyroidism was 470 msec, significantly longer than the mean of 322 msec for an age-related group of 174 normal subjects.

The muscles, slow to contract and relax, are "stiff" to the patient and may seem "firm" to the examining physician. Weakness is variable (c.f. our two patients) and discomfort or aching of muscles may be complaints.

Nobody has yet explained the enlargement of muscle and no specific or even consistent pathologic feature in the muscle has been described. Creatinuria is lacking and creatine tolerance may be increased.

Though not reported in this paper, a most familiar mononeuropathy and peripheral nerve entrapment syndrome — the carpal tunnel syndrome — is common in myxoedema; thickening of connective tissues of the tendon sheaths allegedly entraps the median nerve in the carpal tunnel, producing the classic paresthesiae (often nocturnal) in median nerve distribution in one or both hands. Surgical therapy is most successful for this particular problem. Polyneuropathy, with more diffuse sensory-motor symptoms and signs, has been reported and documented and, like hypothyroid myopathy, is responsive to appropriate thyroid therapy.

Summary

Three examples of neuromuscular disorder secondary to functional thyroid disease, all seen in office consultation within the recent past, have been presented — two with myxoedema and one with thyrotoxicosis. The neuro-muscular disorder disappeared — as usual — with appropriate treatment for the thyroid disease. Review of basic clinical and laboratory features of these neuro-muscular disorders has been attempted. Note is taken of the fact that specific neural or muscle pathology has not yet been established nor pathogenesis fully understood.

Emphasis is placed on the importance of clinical recognition of these dysthyroid-induced neuromuscular states because of their nearly unfailing and complete response to appropriate therapy aimed at the primary thyroid disorder, whether it be hyper- or hypothyroidism.

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Monthly Surveillance Report

Cases of Certain Diseases
Reported to the Michigan Department of Public Health
For the Four Week-Period Ending May 30, 1975

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

	1975 This 4-Week Period	1974 Same 4-Week Period	1975 Total To Above Date	1974 Total Same Date	Total Cases for 1974
Rubella	374	176	1,226	885	1,388
Cong. Rubella Syndrome	0	0	1	0	1
Measles	571	278	2,372	1,561	2,365
Whooping Cough	7	4	40	20	104
Diptheria	0	0	1	0	0
Mumps	1,139	695	6,928	4,296	7,230
Scarlet Fever & Strep Sore Throat	1,923	2,599	13,028	22,076	31,802
Tetanus	0	0	0	1	6
Poliomyelitis (paralytic)	0	0	0	0	2
Hepatitis	236	261	1,242	1,674	3,599
Salmonellosis (other than S. typhi)	69	72	347	460	1,001
Typhoid Fever (S. typhi)	0	0	1	2	11
Shigellosis	45	83	338	422	1,436
Aseptic Meningitis	8	5	37	48	162
Encephalitis	4	4	27	24	69
Meningococcic Meningitis	7	7	50	27	54
H. Influenza Meningitis	10	8	54	54	121
Tuberculosis	138	98	477*	389*	1,431
Syphilis	146	220	705	1,303	2,659
Gonorrhea	2,741	2,891	12,569	13,116	32,152

Information can be supplied by the local health department on the local incidence of disease.

Maurice Reizen, M.D., Director
Michigan Department of Public Health

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*corrected totals

A Review of 187 Patients

Valve Replacement With The Bjork-Shiley Prosthesis

**By Lyle F. Jacobson, MD, FACS
Prescott Jordan, Jr., MD, FACS
Stewart Pursel, MD, FACS
Hilary H. Timmis, MD, FACS
Seymour Gordon, MD
Gerald C. Timmis, MD
Royal Oak**

The evolution of non-biological cardial substitutes during the past 14 years has produced a generation of prostheses which for the most part are less thrombogenic, less obstructive and more durable than their respective antecedents[1].

During the course of our own experience with cardiac valve replacement in over 500 patients, which encompassed this period, we availed ourselves of the desirable qualities of the Starr-Edwards and Smeloff-Cutter valve prostheses. More recently the Bjork-Shiley valve has been used to mitigate the obstructive character of ball valves demonstrated at suprabasal cardiac outputs[2,3,4].

This prosthesis which became available for clinical use in 1970, was selected for several reasons. The low profile character of the Bjork-Shiley valve lends itself well to implantation in both the aortic and mitral areas while still accommodating central flow across the prosthesis[5,6]. It is also one of the least obstructing of all valve substitutes owing to a hemodynamically favorable OD/ID ratio of the sewing ring. Impedence to transvalvular flow is further minimized by the rapid reaction time of the free-floating pyrolytic carbon disc and a disc-tilt of 50 to 60 degrees in the open position. Repose of the valve poppet within, rather than on, the prosthetic valve ring when the prosthesis is closed reduces red cell trauma and the tendency for hemolysis and may be partly responsible for the low incidence of thromboembolic phenomena which has been reported thus far[4].

The low thrombogenicity, non-obstructive central flow, reduced incidence of paravalvular leaks which we attribute in part, to the contour of the prosthesis and its diminutive mass has encouraged us to use it exclusively at present, for cardiac valve replacement.

An annual evaluation of patients with one or more Bjork-Shiley prostheses was initiated in January, 1972, and is being continued to expand the limited body of data regarding the clinical performance of this device. The information derived from this ongoing investigation constitutes the basis of the following report.

Materials & Methods

211 Bjork-Shiley prostheses have been implanted in 187 patients, aged four to 76. These include 91 with mitral valve replacement, 71 with aortic valve replacement, 21 with combined mitral and aortic valve replacement, and four with mitral and/or tricuspid valve implantation. A standard technique of cardiopulmonary bypass is employed, usually with moderate hypothermia. Perfusion of the left or both coronary arteries is routinely used during the implantation of aortic prostheses and aortic cross clamping is limited to 15 minute periods in mitral valve replacement. Continuous monitoring of left atrial pressure, atrial or ventricular pacing for rates below 80 and assisted ventilation via a naso-tracheal tube are standard in the early postoperative period.

A vigorous, multifaceted anticoagulation program has been applied fastidiously, usually under the immediate direction of the Cardiology department. This consists of the administration of Aspirin, five grams daily, Persantine 100 milligrams daily, and Coumadin in a dose sufficient to prolong the prothrombin time to twice normal. Those on coumarin derivatives have prothrombin levels examined regularly at two week intervals.

Patients surviving six months or more were personally interviewed and examined by the authors. The original groups consisted of 40 with aortic valves, 49 with mitral valves and nine with combined valve procedures representing an initial follow-up of 93.5, 84.5 and 70 percent respectively. Several more recent patients have been added to this program and approximately half re-evaluated twice. In addition, to the historical and physical examination, the following laboratory data are obtained: CBC, reticulocyte counts, SMA 12, chest x-ray, electrocardiogram and systolic time intervals. Selected patients were also re-studied by cardiac catheterization.

Operative Results – Survival

Surgical (30 day) mortality following isolated and multiple valve replacement is illustrated in

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The authors are with the Department of Cardiology & Cardiovascular Surgery, William Beaumont Hospital.

FIGURE I
OPERATIVE MORTALITY

Valve Implant	No. Patients	Operative Deaths (30 Days)	Percent
Aortic	71	5	7.0
Mitral	91	7	7.7
Aortic & Mitral	21	3	14.2
Total	183	15	8.2

FIGURE II
LATE MORTALITY

Valve Implant	No. Patients	Late Deaths	Percent
Aortic	71	1	1.4
Mitral	91	6	6.5
Aortic & Mitral	21	3	15.0
Total	183	10	5.4

TABLE I
ANALYSIS OF MORTALITY
OPERATIVE (30 Days)

	No. Pts.
Low Output Syndrome	9
Fatal Arrhythmia	2
Coronary Insufficiency	1
Stone Heart Syndrome	1
Rupture Aortic Suture Line	1
Retrograde Aortic Dissection	1
Total	15

TABLE II
ANALYSIS OF MORTALITY
LATE

	No. Pts.
Myocardial Failure	2
Subarachnoid Hemorrhage	2
Cardiomyopathy	1
Myocardial Infarction	1
Valve Disruption	1
Sepsis	1
Hepatic Failure	1
Total	9

Fig. 1 and is comparable to that of Starr, Cooley, Spencer and other pioneers in cardiac valve replacement.[7,8,9] As expected, those receiving aortic valves fared better than the group receiving mitral, or aortic and mitral prostheses mainly because of better myocardial function. Although other causes were met, by and large, intractable pump failure usually accounted for most early fatal outcomes **(Table 1).** Two operative deaths following aortic valve replacement warrant scrutiny. In one instance, the evolution of tonic contraction of the left ventricle, resulting in the stone heart syndrome during bypass precluded successful resuscitation. The other demise followed a pernicious series of morbid events precipitated by intractable hemolysis. The use of an excessively small prosthesis in the diminutive aortic root of a large patient was indicated as the most likely etiology. Additional mortality in those with advanced mitral regurgitation and pulmonary hypertension was probably forestalled by the intraoperative infusion of Priscoline into the pulmonary artery at the termination of bypass and the use of intra-aortic shift balloon assist in selected cases.

Late mortality is shown in **Fig. 2** and is significantly lower than that reported in most series.[10,11] We attributed this to the benevolent properties of the Bjork-Shiley prosthesis itself as well as to the vigorous anticoagulation program cited above. However, as can be seen in **Table 2,** the latter has not been applied without some attrition, a fact that is even more evident during analysis of postoperative complications. Fatal intracranial hemorrhage was responsible for two of 14 late deaths and there were several near misses.

Morbidity

Complications encountered within 30 days are listed in **Table 3.** Eight patients required early exploration for persistent bleeding from the operation site. Laparotomy was performed in two others for massive upper GI bleeding. A variable and usually transient CNS depression probably due to air embolization was noted in six patients. Recurrent ventricular fibrillation, myocardial infarction, jaundice and brachial plexus injury were also seen in this period and effectively managed. One of the three thromboembolic episodes we have seen occurred on the fifth postoperative day and resulted in transient blindness.

Late morbidity was in large part related to Coumadin administration **(Table 4).** Five patients sustained massive upper GI bleeding, two had major hematuria and there were single instances of retroperitoneal bleeding and subarachnoid hemorrhage. Thromboembolism occurred in two patients, producing a transient stroke syndrome in one and a saddle embolus probably following a myocardial infarction in another. Other late complications included para-prosthetic leaks in seven and homologous serum jaundice in five patients.

On direct questioning, about 20% complain of some degree of memory loss for recent events. Although the etiology is equivocal, we are concerned that it may be related to events transpiring during the extracorporeal perfusion.

TABLE III
ANALYSIS OF MORBIDITY
EARLY — (30 Days)

	No. Pts.
Air Embolism	7
Post Operative Bleeding	8
Myocardial Infarction	2
Arterial Embolus	1
G.I. Tract Bleeding	3
Cardiac Arrest	3
Jaundice	5
Brachial Plexus Injury	3
Dehiscence	2
Total	34

TABLE IV
ANALYSIS OF MORBIDITY
LATE

	No. Pts.
Upper G.I. Bleeding*	5
Major Hematuria*	2
Retroperitoneal Bleeding*	1
Subarachnoid Hemorrhage	1
Stroke	1
Jaundice	7
Paraprosthetic Leaks	6
Subacute Bacterial Endocarditis	2
Total	25

*Requiring transfusion

Physiologic Results – Functional Classification

Preoperative assessment of cardiac function (New York Heart Association) placed 79% of those with aortic valve lesions and 82% of those with mitral valve disease in Class III or IV before operation. Postoperatively 96% of the former and 91% of the latter moved to Classes I and II. **(Figures 3 and 4).** A single patient judged to be Class I underwent valve replacement for aortic regurgitation because of sudden and rapid deterioration in the EKG and progressive cardiac enlargement. Those who succumbed regardless of valvular surgery, were invariably in Class III or IV.

CBC and Enzyme Analysis

Only two patients had hemoglobin and hematocrit levels below 11 gm.% and 35% respectively. One of these proved to have infectious mononucleosis. In general, the hemoglobin determinations ranged between 12-14 mg.% with commensurate hematocrit values. A peak reticulocyte count was noted of 2.9%. The level was invariably below one percent, lending support to the absence of significant RBC turnover. The serum lactic dehydrogenase was considered our most accurate index of hemolysis. Over two-thirds were in the normal range. The remaining determinations were only slightly elevated for the most part and none exceeded 500 units.

Electrocardiographic & Roentgenographic Evaluations

Updated electrocardiograms were compared with those obtained before operation. Resolution of electrocardiographic changes of marked left ventricular hypertrophy were commonly met **(Figures 5a and 5b).** Many with atrial fibrillation spontaneously converted to a normal sinus mechanism.

Cardiac size as demonstrated by standard chest films followed a similar pattern of regression **(Figures 6a and 6b).** The group with regurgitant lesions manifested the most profound reduction of cardiomegaly.

Systolic Time Intervals

This non-invasive method of examination which provides myocardial performance information is obtained by simultaneous correlation of the phonocardiogram, EKG and carotid pulse. Specifically, the pre-ejection period, left ventricular ejection time ratio (PEP/LVET) is used to evaluate the status of ventricular function. Although, preoperative assessment by this technique was usually lacking, it is significant that approximately 1/3 postoperative studies were abnormal. While conclusions regarding these measurements are tentative, we believe they point to persistence of ventricular dysfunction in some instances despite marked clinical improvement and reflect what degree of cardiac disability is still compatible with a successful surgical outcome. It is certainly evident that the systolic time intervals correlate more closely with persistence or regression of EKG charges than with the unassisted clinical evaluation and functional classification.

Postoperative Cardiac Catheterization

Postoperatively, hemodynamic studies were performed in several selected patients usually manifesting signs of continued cardiac disability. The pulmonary artery pressure was reduced to normal or at least 50% of the preoperative level in those with prosthetic mitral valves. The mitral valve gradient was below 4 mm. Hg. in all cases. No postoperative aortic transvalvular gradient was recorded in the basal state or during exercise in those with valve replacement for aortic stenosis, except in the instance cited above in which the implantation of a 19 mm. prosthesis was complicated by unrelenting hemolysis.

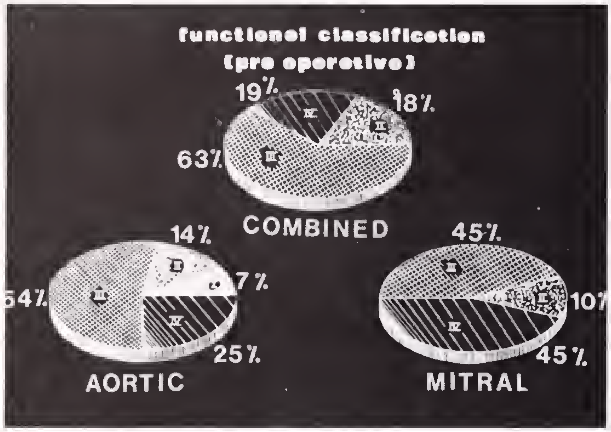

Figure 3

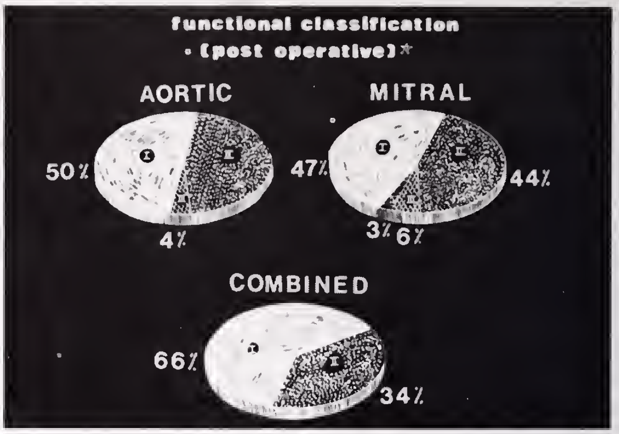

Figure 4

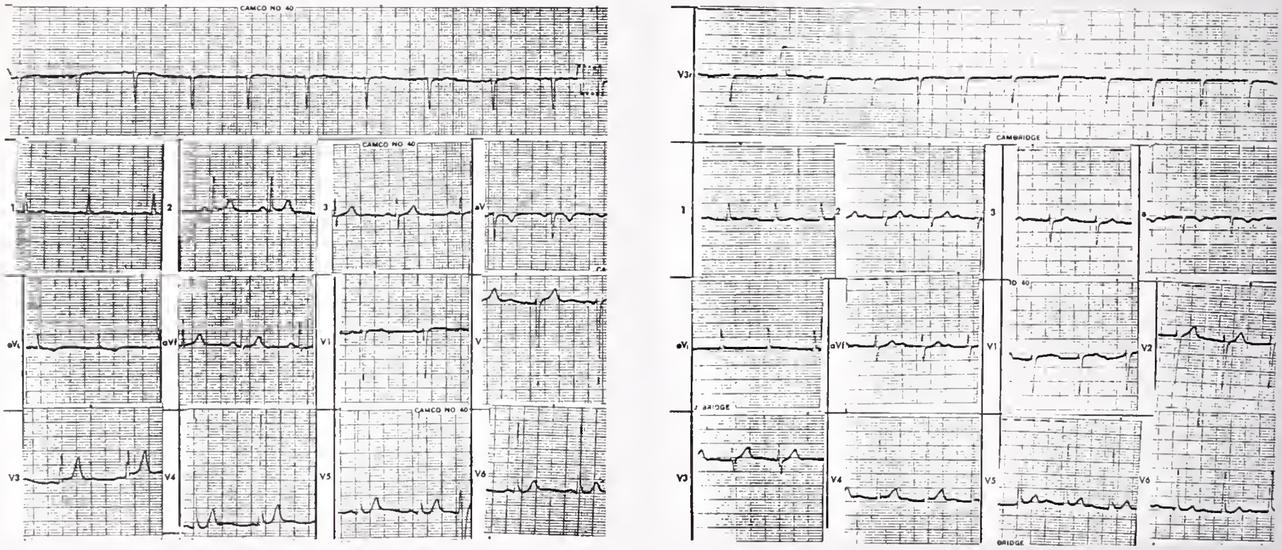
CAMCO NO 40
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Figure 5. In many instances valve replacement is followed by regression of ventricular hypertrophy as demonstrated here by electrocardiograms before (A) and after (B) implantation of an aortic valve prosthesis for aortic insufficiency.

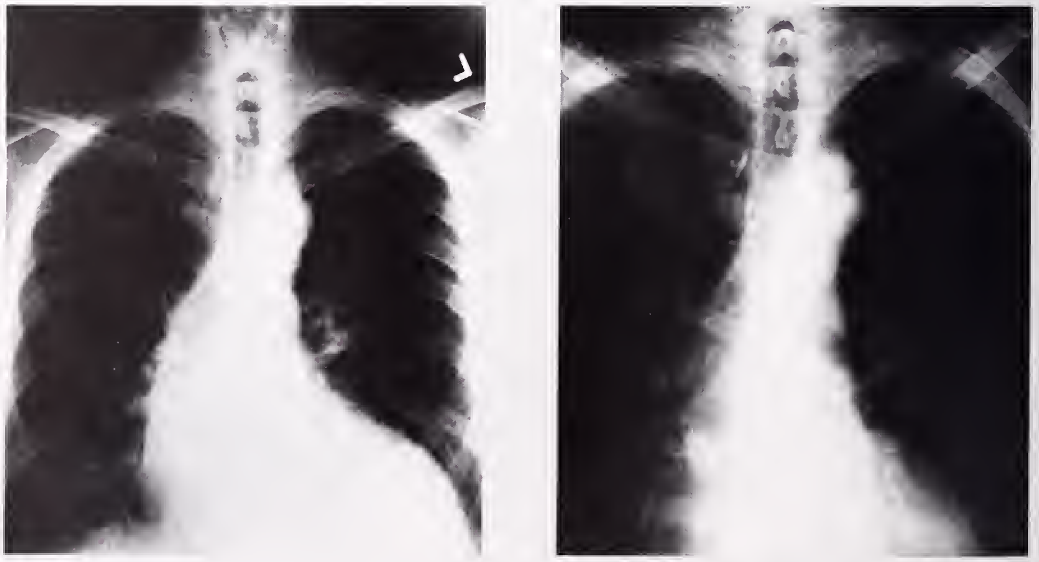

Figure 6. Reduction in cardiac size is most likely to follow valve replacement for regurgitant lesions. A Bjork-Shiley aortic valve prosthesis was used here to correct aortic insufficiency. (Figure 6A and Figure 6B are pre- and post-op chest films).

Discussion

Several conclusions were drawn from the foregoing information. Both early and late mortality usually were the result of advanced cardiomyopathy or coronary artery disease. Improvement in our survival statistics should attend earlier operation before irreversible myocardial damage becomes established. The routine application of coronary arteriography should also eliminate another source of mortality by proper selection of patients for concomitant aortocoronary bypass grafting procedures. Four such patients are included in this series and another was recently salvaged by the combined procedure after intraoperative injury of the left coronary artery.

Anticoagulation with coumarin derivatives continues to represent a major hazard with a significant incidence of late postoperative bleeding and the threat of fatal intracranial hemorrhage. However, despite our previous experience, we continue to believe that it is preferable to treat a usually reversible phenomenon than to be confronted with a crippling or fatal embolic catastrophe. The method reported by Starr, computing the frequency of embolization per 1000 months of patient follow-up has been applied to our own series[12]. No incidence was noted in the aortic group until a saddle embolus was recently met in a patient with a coronary bypass graft as well, who was not receiving Coumadin. Starr in turn, reported a frequency of 1.27% in those with cloth covered aortic valve prostheses. A figure of 2.7% in our mitral group was almost identical to that of Starr's series in which his cloth-covered mitral prosthesis was used.

Because of unusual bleeding, anticoagulation was discontinued completely in four pateints with aortic prostheses. In this group we now rely mainly on salicylates and Persantine. Coumadin was also discontinued in five patients with mitral valve prostheses and combinations of Persantine and Aspirin, or Persantine alone was used. Consequently, approximately 30% of our patients are not on Coumadin derivatives with no incidence of embolus thus far. From this experience and that of Starr and others, it appears that anticoagulation may be discontinued safely, at least in those with certain types of prosthetic aortic valves.

In addition, to the low incidence of thromboembolism, the gratifying late results are attributed in part to the tenacity of buttressed mattress sutures notably, in the aortic root and to the advantageous hemodynamic features of the Bjork-Shiley prosthesis itself. The low transvalvular gradients enhance cardiac output and the economy of cardiac work. Furthermore, because of the large effective valve orifice relative to the tissue diameter of the sewing ring, prostheses larger than 2.0 mm. can be employed without significant obstruction to flow. The low mass and inertia of the free floating disc potentiates its responsiveness to minor changes of pressure and flow. It, therefore, continues to function well in the presence of tachyarrhythmias. This feature plus the limited space it occupies also recommends its selection for valve replacement in the pediatric age group.

Summary

Experience with 187 patients receiving 209 Bjork-Shiley prosthesis is reviewed. Operation survival was 93, 92.3 and 85.8 percent for those receiving aortic, mitral, and both aortic and mitral protheses respectively. The late mortality of 1.4, 6.5 and 14.2 percent for the three groups resulted mainly from myocardial insufficiency. Thromboembolic phenomena were encountered in only 1.17% of all patients, although approximately 30% are no longer on Coumadin. The gratifying early and late survival rate is also attributed to the desirable hemodynamic properties of the valve prosthesis itself

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Perinatal Tips

By Paul M. Zavell, MD
Detroit

The following case from the files of the Wayne County Medical Society Perinatal Mortality Study Committee is presented as an aid in continuing education:

Maternal

This was the first pregnancy for a 19 year old, white Gravida I, Para O (I) mother with O-positive blood type. Little is known of this mother except that "all was well during pregnancy" but she had had no known prenatal care. At approximately 39 wks of gestation she presented in the emergency room of a large hospital in labor. However, membranes had not ruptured spontaneously and were artificially ruptured before delivery. After 12 hours, 40 minutes of labor she delivered her daughter vaginally. The cord was noted at birth snug around the neck and the amniotic fluid was meconium stained. The mother appeared in good health, denied recent illness, use of drugs or medicines and received minimal anesthesia during delivery. Her post-delivery course was medically uneventful.

Fetal

This four pound, six ounce, white, female infant was badly depressed at birth, limp and cyanotic. However, with suction and mask oxygen her apgar score went from 5 in one minute to 9 in five minutes. Initial physical exam at five minutes of age revealed the infant to be small for gestational age, a gr III/VI pan systolic murmur of LSB was heard and skin was peeling off both hands and feet. Otherwise there were no other gross abnormalities. Initial impressions were:

1) Small infant for age due to placental dysfunction syndrome.
2) Possible congenital heart disease (R/O IVSD)

Initial studies revealed blood type O, CBC with Hgb of 18.4 gm. Hct of 60, Rbc of $5.15x10^6$, WBC of 10,900 with 43 PMN, 01 Bd, 50 Lymph, 04 Eosin, adequate platelets, and chest x-ray with "heart being borderline enlarged but otherwise negative."

For 24 hours the infant seemed to do well except the nurses noted that sucking seemed poor and the

(Continued on page 403)

Doctor Zavell is a member, Neo-Natal and Hospital Care Committee, Michigan Chapter, AAP, and chairman, Perinatal Mortality Study Committee, Wayne County Medical Society.

Pro-Banthīne®
brand of
propantheline bromide

Indications: Pro-Banthīne is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution. Fever and possibly heat stroke may occur due to anhidrosis.

Overdosage may cause a curare-like action, with loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted. Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthīne.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

How Supplied: Pro-Banthīne is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

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San Juan, Puerto Rico 00936

Address medical inquiries to: G. D. Searle & Co.
Medical Department, Box 5110, Chicago, Ill. 60680 481

"Antiacid" action for ulcer patients...

one of the many things you need in an anticholinergic.

Pro-Banthīne is considered adjunctive in total peptic ulcer therapy that may include diet, conventional antacids, bed rest, and other supportive measures.

Pro-Banthīne is provided in several different dosage forms which will meet virtually any clinical need. It is just as versatile in filling patient needs, among which are:

"Antiacid" action—Pro-Banthīne® (propantheline bromide) reduces gastric secretory volume and resting total and free acid.

"Analgesic" action—Pro-Banthīne helps to control the acid-spasm-pain complex.

Vigorous anticholinergic action—Pro-Banthīne® Vials, 30 mg., are for intramuscular or intravenous use when prompt and vigorous anticholinergic action is required.

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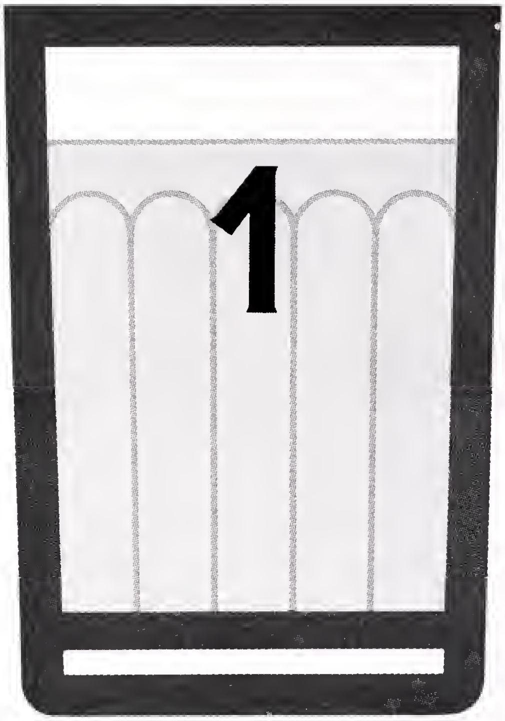
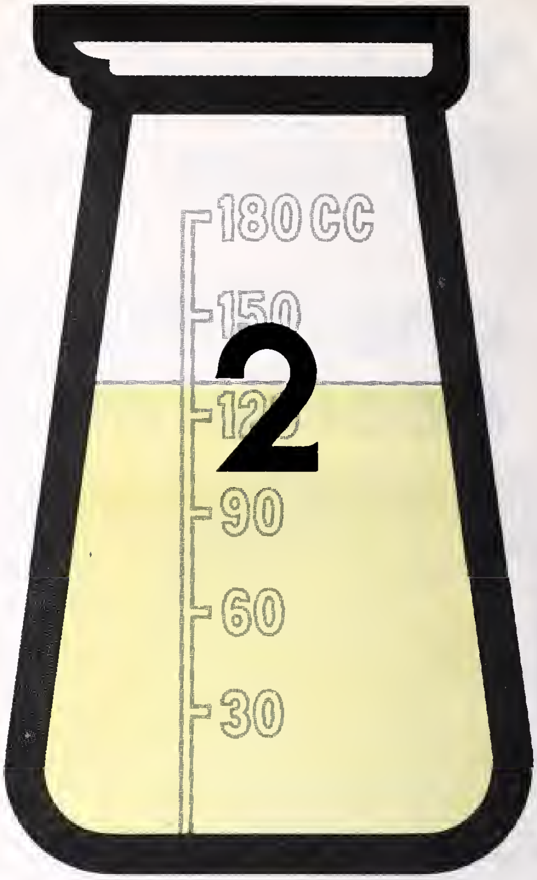
Pro-Banthīne®
(propantheline bromide)

a good
option
in peptic
ulcer

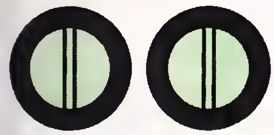


Adequate fluid intake


2
180 CC
150
90
60
30

Frequent voiding

The 3rd Basic



Gantanol®
(sulfamethoxazole) B.I.D.

Four tablets (0.5 Gm each) STAT–then 2 tablets B.I.D. for 10-14 days

Basic therapy with convenience for acute nonobstructed cystitis

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis, and cystitis) due to susceptible organisms. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials, including sulfonamides, especially in chronic or recurrent urinary tract infections.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

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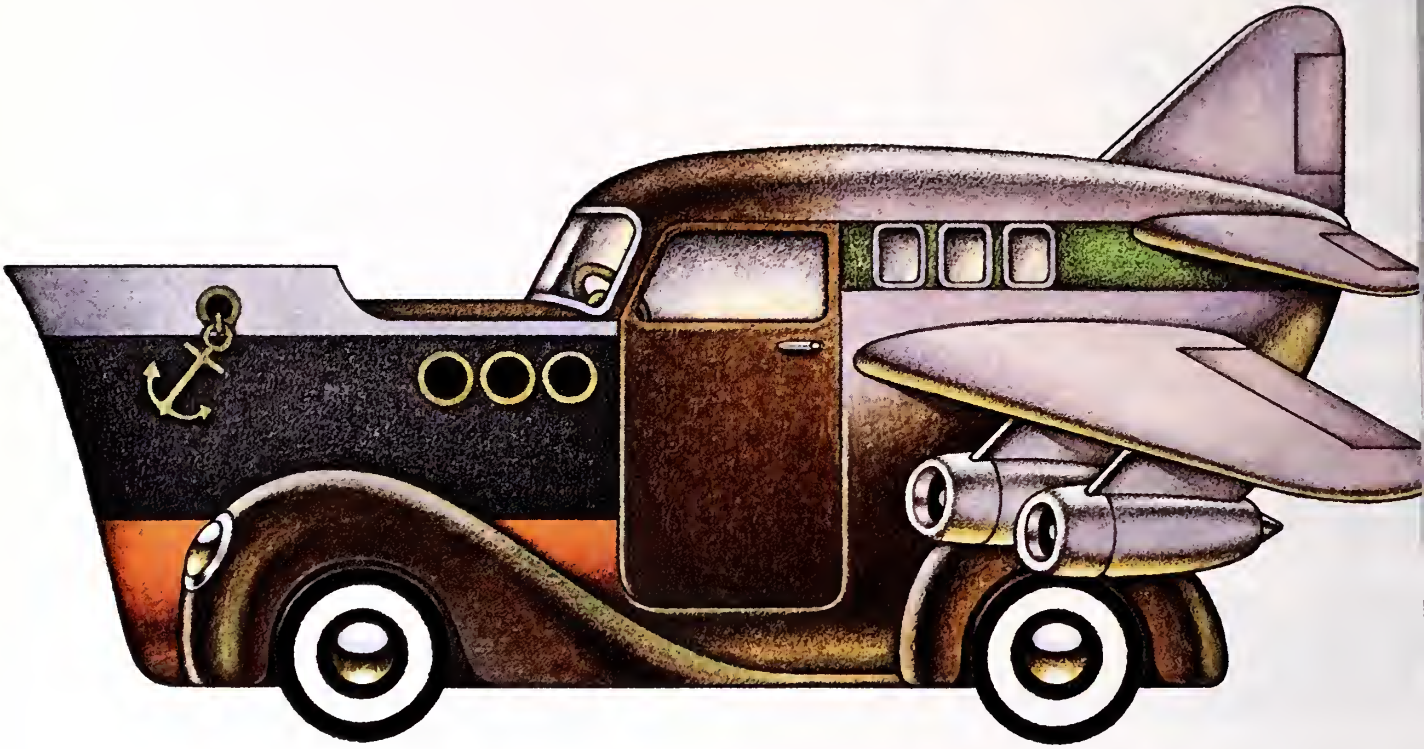
- **Effective against susceptible E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis and, less frequently, Proteus vulgaris**



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Up to 24 hours of effective control with a single dose...in nausea, vomiting and dizziness associated with motion sickness.

Dosage: 25 to 50 mg. 1 hour before travel.
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BRIEF SUMMARY OF PRESCRIBING INFORMATION

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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Antivert®/25 Chewable Tablets
(meclizine HCl) 25 mg.
for motion sickness

Comparison of Urinary Concentration Tests: Osmolality, Specific Gravity, And Refractive Index

By Seyed Bakhshandeh, MD
Yoshikazu Morita, MD
Royal Oak

Urinary concentration is most logically measured by osmolality, especially when this is related to a simultaneously determined plasma osmolality. However, for the practical reasons of economy and rapidity of operation, the osmometer is rarely used in routine analyses. Rather, the hydrometer, which measures specific gravity, and the refractometer, which measures refractive index, are used extensively. Recently, the refractometer has come into wider use; its advantages over the hydrometer include the requirement for a much smaller volume of urine, its compactness, and ease of use. It has long been known that the results of the hydrometer do not correlate perfectly with the osmometer in measuring the concentrating power of the kidney,[1,2,3] especially in certain clinical conditions. There is much less published information, however, on the correlation between concentration as measured by the refractometer versus the osmometer.[4,5]

The purpose of this study is to show the correlation among these three methods and to determine under what circumstances the correlation is poor.

Methods

Urine samples were obtained from 110 unselected hospitalized patients. Osmolality was measured by freezing point depression in an Advance Digimatic Osmometer Model 3-D. The specific gravity was measured by a certified hydrometer which was carefully cleaned before each use. Urine was at room temperature at the time of testing. The refractive index was measured by an American Optical refractometer. All measurements were done by the same person.

Initially, urine samples were taken at random. Subsequently, urine samples from certain selected clinical conditions were studied. These groups included 14 patients who were found to have heavy proteinuria, defined as 3+ to 4+ on sulfosalicylic acid testing; 14 patients with heavy glycosuria, defined as 3+ to 4+, determined by Tes-tape; 11 patients with advanced uremia; 10 patients with normal renal function who were receiving a 1,000 mg. sodium diet; and 14 patients who had just completed an intravenous pyelogram.

Results

In the 110 random samples of urine, correlation between osmolality and specific gravity is good (r

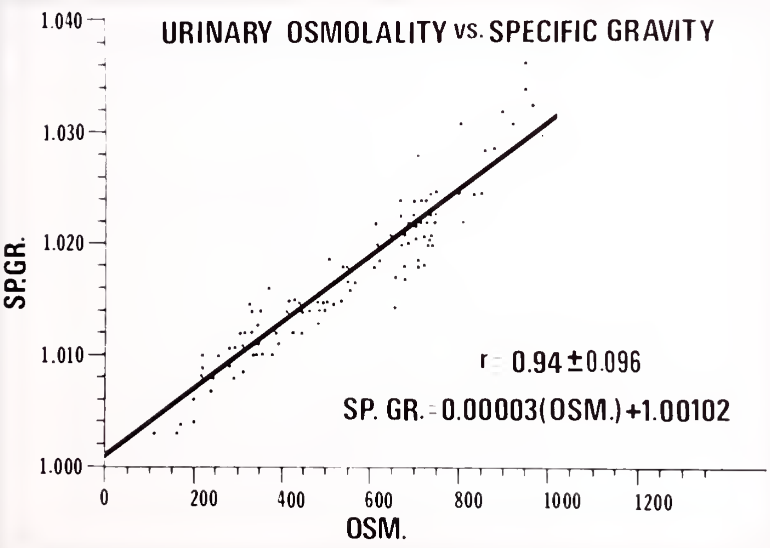

Fig. 1 — Correlation between osmolality (mOsm/Kg) and specific gravity in 110 random samples of urine.

Doctor Morita is Chief, Department of Medicine, William Beaumont Hospital, while Doctor Bakhshandeh is with the Division of Nephrology, Department of Medicine, Wayne County General Hospital, Eloise.

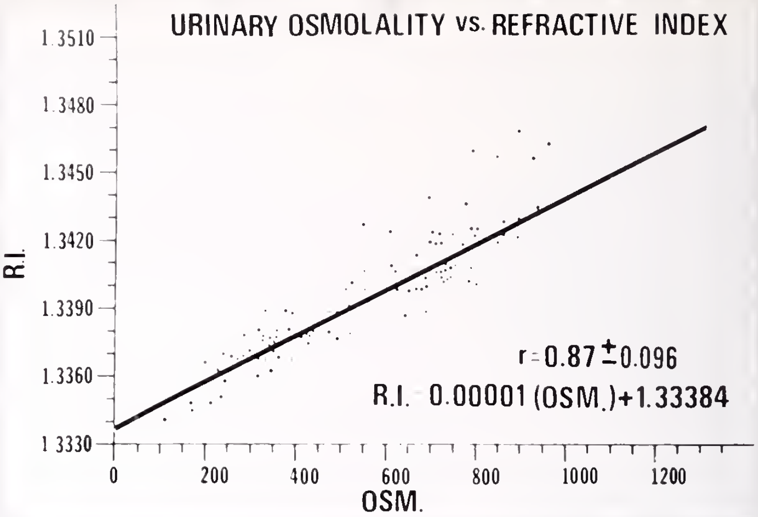

Fig. 2 — Correlation between osmolality (mOsm/Kg) and refractive index in 110 random samples of urine.

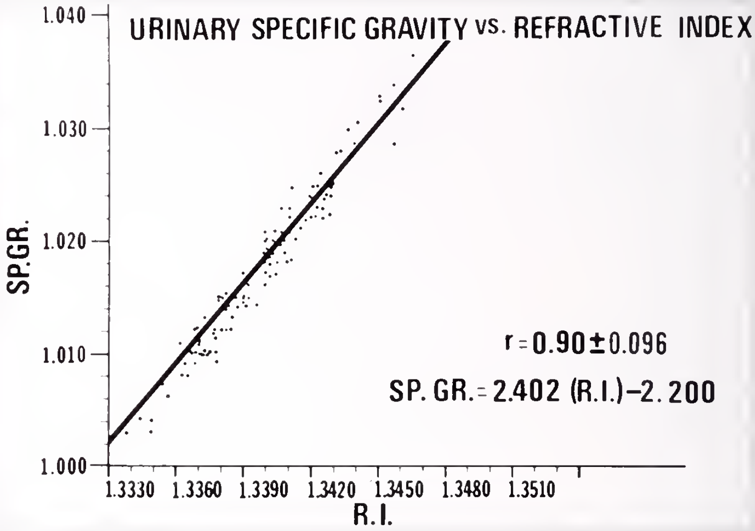

Fig. 3 — Correlation between specific gravity and refractive index in 110 samples of urine.

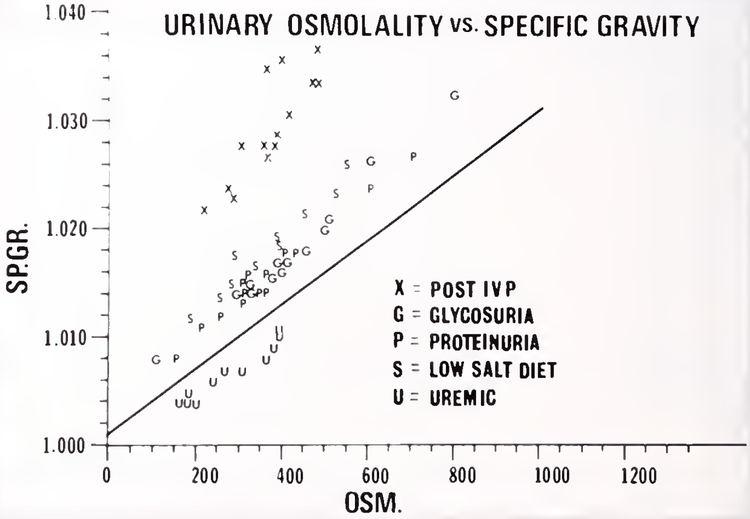

Fig. 4 — Correlation between osmolality (mOsm/Kg) and specific gravity in five subgroups, as noted in the above legend. The line of regression here is the same as the one shown in Fig. 1 and is derived from the 110 random samples of urine.

= 0.94 ± 0.096, **Fig. 1**). Likewise, there is good correlation between osmolality and refractive index (r = 0.87 ± 0.096, **Fig. 2**), as well as between specific gravity and refractive index (r = 0.90 ± 0.096, **Fig. 3**). Despite the good overall correlation in **Fig. 1,** some samples deviate widely from the line of regression. The clinical circumstances under which these samples were collected were investigated, and resulted in the identification of

(Continued on page 402)

Must vasodilators and therapy for other diseases come into conflict?

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Vasodilan is not incompatible with any of these drugs—no treatment conflict has been reported. And, unlike other vasodilators, Vasodilan has not been reported to affect carbohydrate metabolism, liver function, or intraocular pressure—or to complicate treatment of diabetes, hypertension, peptic ulcer, glaucoma, or liver disease.

In fact, there are no known contraindications to the use of Vasodilan in recommended oral doses, other than that it should not be given in the presence of frank arterial bleeding or immediately postpartum.

---

1. Gertler, M. M., et al.: Geriatrics *25*:134-148 (May) 1970.

Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Adverse Reactions: On rare occasions, oral administration of the drug has been associated in time with the occurrence of severe rash. When rash appears, the drug should be discontinued. Occasional overdosage effects such as transient palpitation or dizziness are usually controlled by reducing the dose.

Supplied: Tablets, 10 mg.—bottles of 100, 1000, 5000 and Unit Dose; 20 mg.—bottles of 100, 500 and Unit Dose.

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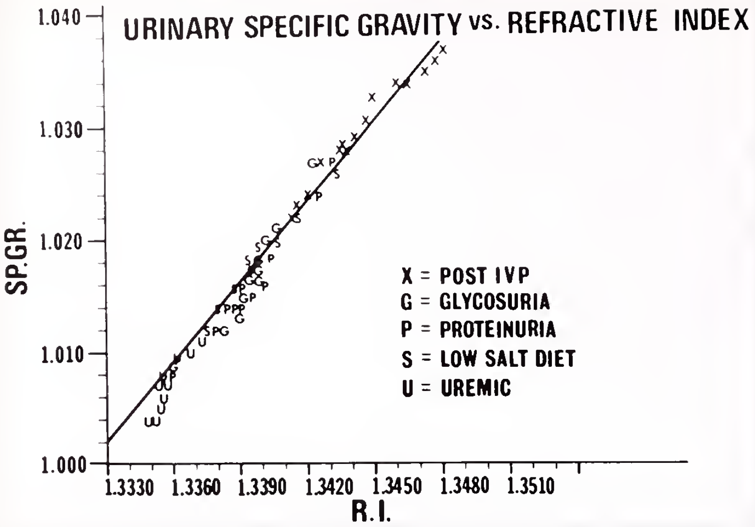

Fig. 5 — Correlation between specific gravity and refractive index in the same five sub-groups displayed in Fig. 4. The line of regression is the same as the one shown in Fig. 3 and is based upon 110 random urine samples. Note that these sub-group samples do not deviate significantly from the line of regression.

several sub-groups of patients in whom the urine samples did not show good correlation between osmolality and specific gravity. **Figure 4,** symbol x, shows the correlation between specific gravity and osmolality in urine samples taken from 14 patients who had just completed intravenous pyelography. All these points fall well above the line of regression. Less striking upward deviations from the line of regression are found in the case of urine from patients with heavy proteinuria, heavy glycosuria, and in patients on a 1,000 mg. sodium diet. Samples from uremic patients consistently fall below the line of regression.

Discussion

A generally good correlation between specific gravity and osmolality of a urine sample, as shown in **Figure 1,** justifies the long-standing practice of determining concentration of urine by means of the hydrometer.

Blind reliance on the hydrometer, however, may lead to erroneous conclusions, as illustrated in the case of certain sub-categories of patients. The heavily iodinated compounds used in intravenous pyelography, glucose, and proteins when present in the urine in large amounts exert a much greater effect upon specific gravity than on osmolality. The specific gravity of urine from a normal person is the average specific gravity due to the major solutes present. The phosphates, the sulfates, and bicarbonates produce rather dense solutions which, for a given osmolality, raise the specific gravity considerably more than chloride salts, ammonium salts, and urea.[6]

The usual amounts of these compounds in the urine results in the average correlation between osmolality and specific gravity as indicated by the line of regression in **Figure 1.** The iodinated compound used for intravenous pyelography, as well as glucose and serum albumin, resemble the phosphate salts in that they have a greater effect upon specific gravity than on osmolality. Urine samples which contain large amounts of these substances therefore will not show the average correlation between specific gravity and osmolality. In the presence of these compounds, an evaluation of the concentrating power of the kidney based upon specific gravity alone will result in an overestimation. In the case of patients on a low sodium diet, the less than normal amounts of sodium and chloride in the urine results in the preponderance of the heavier phosphate salts.

Thus, dependence upon the specific gravity for determination of concentration will again result in over estimation. In the case of uremic patients, it can be speculated that the decrease in phosphates in the urine as a result of low phosphate intake and the use of phosphate absorbing aluminum hydroxide as part of therapy result in the preponderance of lighter molecules in the urine, thus under-estimating the concentrating power when specific gravity is used for this purpose. Low molecular weight dextran and mannitol have an effect similar to glucose and pyelographic media upon the relationship between specific gravity and osmotic pressure.

Refractive index correlates very well with specific gravity in random urine samples **(Fig. 3),** and even in the case of the special sub-groups selected in our study **(Fig. 5).** There is justification, therefore, for replacing the hydrometer with the refractometer. Further, there is justification for the common practice of expressing the results of the refractometer, not in refractive indices, but in terms of specific gravity. However, it must be remembered that the refractometer is heir to the same errors of interpretation as is the hydrometer, and that the deviations are of similar magnitude and in the same direction. In clinical practice, unusual findings by refractometer or by hydrometer should be checked with the osmometer.

Summary

Correlation among osmolality, specific gravity, and refractive index was measured in 110 random urine samples and also in certain selected clinical conditions. The coefficient of correlation was 0.94 ± 0.096 between osmolality and specific gravity, 0.87 ± 0.096 between osmolality and refractive index, and 0.90 ± 0.096 between specific gravity and refractive index. Specific gravity and refractive index in the case of urine samples from patients on a low sodium diet consistently overestimated the concentration as measured by osmolality. The same was true of urines containing pyelographic media, large amounts of sugar, or large amounts of protein. In the case of patients with advanced uremia, specific gravity and refractive index underestimated the concentration as measured by osmolality.

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PERINATAL TIPS/*Continued*

infant tired easily. At 30 hours of age the heart murmur disappeared. By 54 hours of age jaundice and lethargy were noted and the infant was placed under phototherapy. Bilirubin at this time was 10.5 mgm total (9.1 mgm % indirect), calcium was 9.4 mEq/1. The infant appeared very quiet.

By 76 hours of age total bilirubin was 15.7 mgm % (13.4 mgm % indirect) and it was decided to do an exchange transfusion which was accomplished with fresh O+ blood without difficulty. Because the infant became noticeably opistholonic after the exchange a spinal tap was done. This revealed

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Monthly Surveillance Report

Cases of Certain Diseases
Reported to the Michigan Department of Public Health
For the Five Week Period Ending May 2, 1975

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

	1975 This 5-Week Period	1974 Same 5-Week Period	1975 Total To Above Date	1974 Total Same Date	Total Cases for 1974
Rubella	284	307	852	709	1,388
Cong. Rubella Syndrome	0	0	1	0	0
Measles	642	408	1,801	1,283	2,365
Whooping Cough	7	2	33	16	104
Diphtheria	0	0	1	0	0
Mumps	1,747	937	5,789	3,601	7,230
Scarlet Fever & Strep Sore Throat	2,458	4,291	11,105	19,477	31,802
Tetanus	0	0	0	1	6
Poliomyelitis (Paralytic)	0	0	0	0	2
Hepatitis	245	346	1,006	1,413	3,599
Salmonellosis (other than S. typhi)	53	89	278	388	1,001
Typhoid Fever (S. tyhpi)	0	0	1	2	11
Shigellosis	73	63	293	339	1,436
Aseptic Meningitis	8	9	29	43	162
Encephalitis	5	10	23	20	69
Meningococcic Meningitis	11	5	43	20	54
H. Influenza Meningitis	11	10	44	46	121
Tuberculosis	116	76	344*	298	1,431
Syphilis	142	222	559*	1,083	2,659
Gonorrhea	2,100	2,158	9,828	10,255	32,152

Information can be supplied by the local health department on the local incidence of disease.

Maurice Reizen, M.D., Director
Michigan Department of Public Health

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*Corrected totals.

cloudy fluid with 145,000 WBC (100% PMN) and 4700 Rbc with total protein of 450 but only 15 for sugar. The diagnosis was now changed to meningitis and Aq. Cryst Penciliin 200,000 U IV stat and 100,000 U q 12 hr as well as Kanamycin 15 mgm q 12 h IM were started. Later when the spinal and blood cultures were reported as showing Beta Strep, not Group A, the Kanamycin was discontinued. The infant continued to be jaundiced with Bilirubins ranging from 16.5 to 12.5 mgm % total over the next 48 hrs.

However, repeat spinal tap at this time showed the spinal fluid clearing with 723 WBC (64% PMN, 36% Mono). Multiple studies were done in the following one to two weeks but none seemed to decide why the infant remained jaundiced. At about two and a half weeks of age the possibility of hepatitis or congenital biliary atresia were entertained. Multiple liver function and enzyme tests were done and all were reported as grossly abnormal.

At about 41 days of age an exploratory laporatomy with cholangiogram was done revealing a normal biliary tree but hepatitis with pseudoacinar transformation of hepatic parenchyma (either infectious or toxic). Despite these problems she gradually improved and was discharged home in good health at two months of age and has done well since.

Perinatal Committee Comments

1. Although such cases as this with no prenatal care and presenting in labor in the emergency rooms continue to occur, it is hoped that with further public education and judicious use of federal or state monies these will occur less and less.
2. There is no mention of either the mother or the infant having blood studies for syphilis done. Although this was not the case here, remember that it is wise for mother at term (and when first seen in pregnancy) to have VDRL or STS, etc. done. Also when an infant presents with a confusing course always remember to try to rule out congenital syphilis since this disease can initiate many other diseases.
3. With poor sucking, a tired infant and persistent jaundice, earlier attention to possible sepsis and/or meningitis was in order. An earlier spinal tap might have been considered here.
4. For prematurity and for AO blood incompatability use of the bilirubin phototherapy lamp is a useful tool. However, as clearly pointed out here this cannot be entirely relied upon and an exchange transfusion may have to be done. This necessitates careful monitoring of the infant's course. Also we should point out use of phenobarbital to counteract the jaundice almost certainly would have failed and might have been incorrectly incriminated as the cause of the hepatitis noted here.

Bayview Wing, Palms of Pasadena Hospital
Opened February 1975

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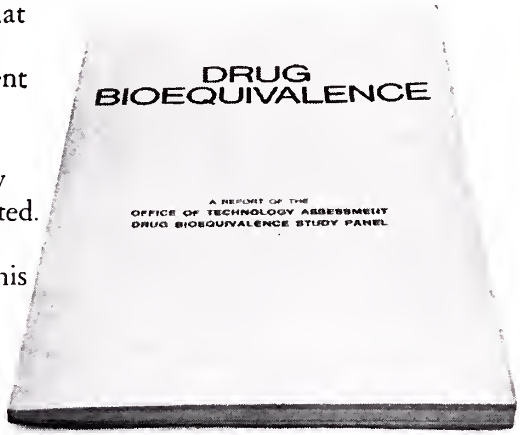
Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalency in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.



DRUG
BIOEQUIVALENCE

A REPORT OF THE
OFFICE OF TECHNOLOGY ASSESSMENT
DRUG BIOEQUIVALENCE STUDY PANEL

"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and
(b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or
(c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...

P·M·A

Pharmaceutical Manufacturers
Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

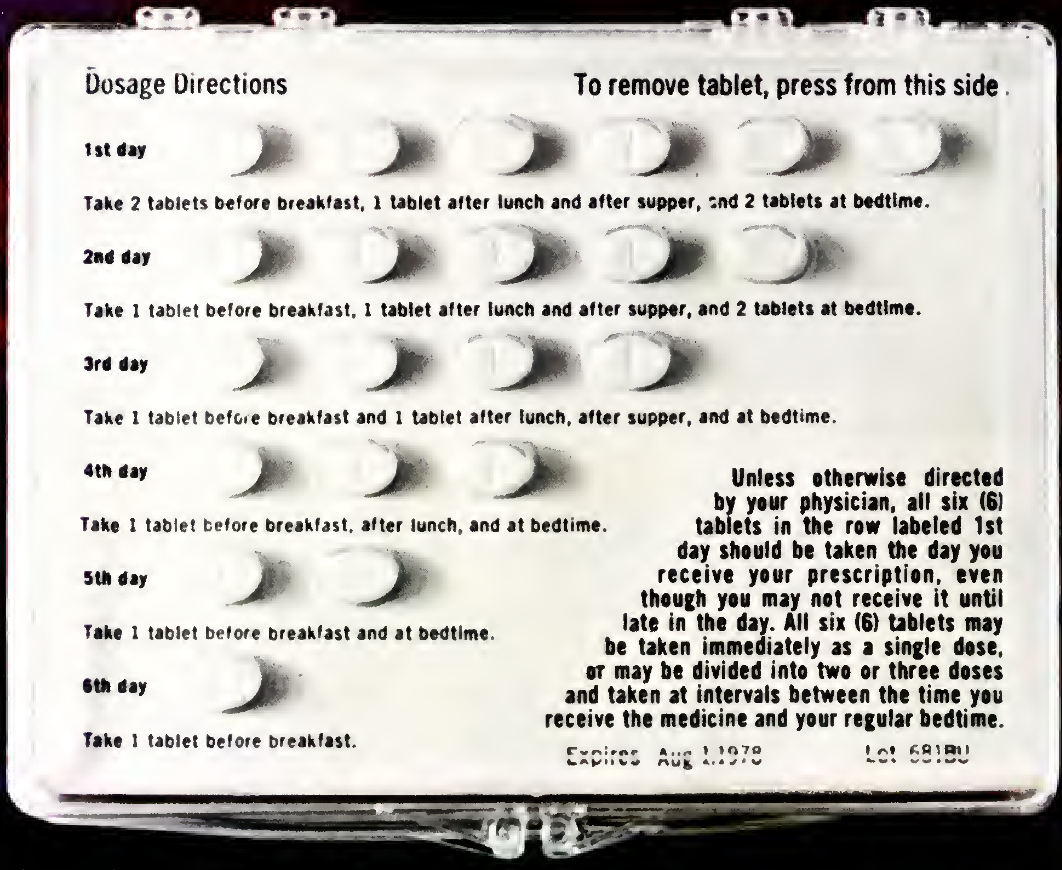
*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

protecting the integrity of your prescription

If severe contact dermatitis does not respond to conventional therapy...

Medrol® 4 mg Dosepak™...

(methylprednisolone, Upjohn) short-term, tapered, corticosteroid therapy



Dosage Directions

To remove tablet, press from this side.

1st day

Take 2 tablets before breakfast, 1 tablet after lunch and after supper, and 2 tablets at bedtime.

2nd day

Take 1 tablet before breakfast, 1 tablet after lunch and after supper, and 2 tablets at bedtime.

3rd day

Take 1 tablet before breakfast and 1 tablet after lunch, after supper, and at bedtime.

4th day

Take 1 tablet before breakfast, after lunch, and at bedtime.

5th day

Take 1 tablet before breakfast and at bedtime.

6th day

Take 1 tablet before breakfast.

Unless otherwise directed by your physician, all six (6) tablets in the row labeled 1st day should be taken the day you receive your prescription, even though you may not receive it until late in the day. All six (6) tablets may be taken immediately as a single dose, or may be divided into two or three doses and taken at intervals between the time you receive the medicine and your regular bedtime.

Expires Aug 1,1978 Lot 681BU

The explicit printed dosage instructions that accompany each Dosepak make it easy for the patient to understand and follow the dosage regimen.

Poison ivy and other severe allergic states intractable to adequate trials of conventional treatment will often respond to a short, intensive, adjunctive course of Medrol. Medrol Dosepak is designed to provide a tapered, six-day course of methylprednisolone tablets.

On occasion, a six-day course of Medrol therapy may not be sufficient and therapy may need to be extended. If there is continued contact with the sensitizing agent, corticosteroids will not completely suppress the inflammatory response. A further caution: If lesions become infected during Medrol therapy, it should be remembered that steroids may decrease resistance to infection and hinder the body's ability to localize an infection.

MEDROL COMPRESSED TABLETS—2, 4 & 16 MG
(METHYLPREDNISOLONE TABLETS, N.F., UPJOHN)

DESCRIPTION AND ACTIONS: Medrol (methylprednisolone) is a synthetic glucocorticoid with potent anti-inflammatory effects It is readily absorbed from the GI tract Glucocorticoids cause profound and varied metabolic effects and modify the body's immune responses to diverse stimuli.

INDICATIONS: 1 **Endocrine Disorders:** Primary or secondary adrenocortical insufficiency (hydrocortisone or cortisone is the first choice. synthetic analogs may be used in conjunction with mineralocorticoids where applicable, in infancy, mineralocorticoid supplementation is of particular importance) Congenital adrenal hyperplasia, nonsuppurative thyroiditis, hypercalcemia associated with cancer 2 **Rheumatic Disorders:** As adjunctive therapy for short-term administration (to tide the patient over an acute episode or exacerbation) in psoriatic arthritis, rheumatoid arthritis (selected cases may require low-dose maintenance therapy), ankylosing spondylitis. acute and subacute bursitis, acute nonspecific tenosynovitis. acute gouty arthritis 3 **Collagen Diseases:** During an exacerbation or as maintenance therapy in selected cases of—Systemic lupus erythematosus, acute rheumatic carditis 4 **Dermatologic Diseases:** Pemphigus; bullous dermatitis herpetiformis, severe erythema multiforme (Stevens-Johnson syndrome), exfoliative dermatitis, mycosis fungoides, severe psoriasis 5 **Allergic States:** Control of severe or incapacitating allergic conditions intractable to adequate trials of conventional treatment Seasonal or perennial allergic rhinitis, bronchial asthma, contact dermatitis, atopic dermatitis, serum sickness 6 **Ophthalmic Diseases:** Severe acute and chronic allergic and inflammatory processes involving the eye and its adnexa such as—allergic corneal marginal ulcers, herpes zoster ophthalmicus, anterior segment inflammation, diffuse posterior uveitis and choroiditis, sympathetic ophthalmia, allergic conjunctivitis, keratitis, chorioretinitis, optic neuritis, iritis and iridocyclitis 7 **Respiratory Diseases:** Symptomatic sarcoidosis, Loeffler's syndrome not manageable by other means; berylliosis, fulminating or disseminated pulmonary tuberculosis when concurrently accompanied by appropriate antituberculous chemotherapy 8 **Hematologic Disorders:** Idiopathic and secondary thrombocytopenia in adults, acquired (autoimmune) hemolytic anemia erythroblastopenia (RBC anemia), congenital (erythroid) hyperplastic anemia 9 **Neoplastic Diseases:** For palliative management of. leukemias and lymphomas in adults, acute leukemia of childhood 10 **Edematous States:** To induce a diuresis or remission of proteinuria in the nephrotic syndrome, without uremia, of the idiopathic type or that due to lupus erythematosus 11 **Miscellaneous:** Tuberculous meningitis with subarachnoid block or impending block when concurrently accompanied by appropriate antituberculous chemotherapy Systemic dermatomyositis (polymyositis)

CONTRAINDICATIONS: Systemic fungal infections

WARNINGS: In patients on corticosteroid therapy subjected to unusual stress, increased dosage of rapidly acting corticosteroids before, during, and after the stressful situation is indicated

Corticosteroids may mask some signs of infection and new infections may appear during their use There may also be decreased resistance and inability to localize infection. Prolonged use may enhance the establishment of secondary ocular infections due to fungi or viruses

Since adequate human reproductive studies have not been done, the use in pregnancy, nursing mothers or women of childbearing potential requires that the possible benefits be weighed against the potential hazards to the mother and the embryo or fetus Infants should be observed for signs of hypoadrenalism

Average and large doses of hydrocortisone or cortisone can cause elevation of blood pressure, salt and water retention, and increased excretion of potassium These effects are less likely to occur with the synthetic derivatives except when used in large doses Dietary salt restriction and potassium supplementation may be necessary All corticosteroids increase calcium excretion.

While on corticosteroid therapy, patients should not be vaccinated against smallpox. Other immunization procedures should not be undertaken in patients who are on corticosteroids, especially on high dose, because of possible hazards of neurological complications and a lack of antibody response.

The use of corticosteroids in active tuberculosis should be restricted to those cases of fulminating or disseminated tuberculosis in which the corticosteroid is used for the management of the disease in conjunction with an appropriate antituberculous regimen.

If corticosteroids are indicated in patients with latent tuberculosis or tuberculin reactivity, close observation is necessary as reactivation of the disease may occur During prolonged corticosteroid therapy, these patients should receive chemoprophylaxis

PRECAUTIONS: Hormone therapy is an adjunct to, and not a replacement for, conventional therapy

Dosage should be individualized according to the severity of the disease and the response of the patient As soon as a satisfactory clinical response is obtained, the daily dose should be reduced, either to termination of treatment or to the minimal effective maintenance dose level The lowest possible dose should be used and when reduction in dosage is possible, the reduction should be gradual if the drug has been administered for more than a few days If a period of spontaneous remission occurs in a chronic condition, treatment should be discontinued

Drug-induced secondary adrenocortical insufficiency may be minimized by gradual reduction of dosage This type of relative insufficiency may persist for months after discontinuation of therapy, therefore, in any situation of stress occurring during that period, hormone therapy should be reinstituted Since mineralocorticoid secretion may be impaired, salt and/or a mineralocorticoid should be administered concurrently

There is an enhanced effect of corticosteroids on patients with hypothyroidism and in those with cirrhosis

Corticosteroids should be used cautiously in patients with ocular herpes simplex because of possible corneal perforation

Psychic derangements may appear or existing emotional instability or psychotic tendencies may be aggravated by corticosteroids

Aspirin should be used cautiously in conjunction with corticosteroids in hypoprothrombinemia

Steroids should be used with caution in nonspecific ulcerative colitis, if there is a probability of impending perforation, abscess or other pyogenic infection, diverticulitis, fresh intestinal anastomoses, active or latent peptic ulcer, renal insufficiency, hypertension, osteoporosis, and myasthenia gravis

Growth and development of infants and children on prolonged corticosteroid therapy should be carefully observed

Blood pressure, body weight, routine laboratory studies, including 2-hour postprandial blood glucose and serum potassium, and a chest X-ray should be obtained at regular intervals during prolonged therapy Upper GI X-rays are desirable in patients with known or suspected peptic ulcer disease

ADVERSE REACTIONS: Fluid and Electrolyte Disturbances. Sodium retention, fluid retention, congestive heart failure in susceptible patients, potassium loss hypokalemic alkalosis, hypertension **Musculoskeletal.** Muscle weakness, steroid myopathy, loss of muscle mass, osteoporosis, vertebral compression fractures, aseptic necrosis of femoral and humeral heads, pathologic fracture of long bones **Gastrointestinal.** Peptic ulcer with possible perforation and hemorrhage, pancreatitis, abdominal distention, ulcerative esophagitis **Dermatologic.** Impaired wound healing, thin fragile skin, petechiae and ecchymoses, facial erythema, increased sweating May suppress reactions to skin tests **Neurological.** Increased intracranial pressure with papilledema (pseudotumor cerebri) usually after treatment Convulsions, vertigo, headache **Endocrine.** Development of Cushingoid state, suppression of growth in children, secondary adrenocortical and pituitary unresponsiveness, particularly in times of stress, as in trauma, surgery or illness, menstrual irregularities, decreased carbohydrate tolerance, manifestations of latent diabetes mellitus, increased requirements for insulin or oral hypoglycemic agents in diabetics **Ophthalmic.** Posterior subcapsular cataracts, increased intraocular pressure, glaucoma exophthalmos **Metabolic.** Negative nitrogen balance due to protein catabolism

DOSAGE AND ADMINISTRATION: The initial dosage may vary from 4 to 48 mg per day **Requirements are variable and must be individualized on the basis of the disease under treatment and the response of the patient.** The proper maintenance dosage should be determined by decreasing the initial dosage in small decrements at appropriate time intervals until the lowest dosage which will maintain an adequate clinical response is reached If after long-term therapy the drug is to be stopped, it is recommended that it be withdrawn gradually rather than abruptly

ALTERNATE-DAY THERAPY (ADT): ADT is a corticosteroid dosing regimen in which twice the usual daily dose of corticoid is administered every other morning The purpose of this mode of therapy is to provide the patient requiring long-term pharmacologic dose treatment with the beneficial effects of corticoids while minimizing certain undesirable effects including pituitary-adrenal suppression, the Cushingoid state, corticoid withdrawal symptoms, and growth suppression in children

Medrol (methylprednisolone) or other short-acting (producing adrenocortical suppression for 1¼ to 1½ days following a single dose) corticoids are recommended for ADT Complete control of symptoms will not be possible in all patients When considering this mode of therapy, keep in mind the basic principles and indications for corticosteroid therapy The benefits of ADT should not encourage the indiscriminate use of steroids

SUPPLIED: **2 mg**—in bottles of 30 and 100 scored tablets, **4 mg**—in bottles of 30, 100 and 500 scored tablets and in 21 scored tablet Dosepak™, **16 mg**—in bottles of 50 scored tablets and in 14 scored tablet ADT Pak® (formerly Alternate Daypak®)

MED B-8 S (MAG)

FOR ADDITIONAL PRODUCT INFORMATION, CONSULT THE PACKAGE INSERT OR SEE YOUR UPJOHN REPRESENTATIVE.

[illegible] 748-4 [illegible]

Short-term, adjunctive, corticosteroid therapy

Medrol® 4 mg Dosepak™
(methylprednisolone)

1974 The Upjohn Company

Upjohn The Upjohn Company Kalamazoo, Michigan 49001

Opinion

Medio-legal Implications of the Drug Insert

By W. H. Johnson, MD
Three Rivers

As anyone who practices medicine in Michigan is well aware, the practicing physician has to be on constant alert to avoid medical legal problems. As if we all didn't have enough to be concerned about, our attention as of late has been drawn to a number of boldly headlined articles, such as; "Ignore The Drug Package Insert At Your Own Peril."[1]

Articles so entitled do little to ease the anxieties of the current day physician, who sees himself or herself threatened by real or imaginary adversaries at every turn.

So many questions arise as to the meaning and importance of the drug insert, that its history and derivation in relationship to the Federal Drug Administration, government liability, and to physician liability need to be explored.

History

In 1906, the Pure Food and Drug Act was passed requiring the proper and accurate labeling of drugs to protect the consuming public.

The year 1938 saw the passage of the Federal Food, Drug and Cosmetic Act as a replacement for the 1906 law. The 1938 law made the approval of new drugs mandatory and extended the labeling authority to inform the physician of the safety of the involved drug. This statute required that new drugs receive approval from the FDA before they were released to the public.[2] In 1961 the basic law was further amended to require "full disclosure" of the drug as to indication, contra-indications, possible side effects and *efficacy*. The only drugs that are exempt are those marketed before the 1938 amendment, and approximately a dozen or so introduced since that time.[3]

Derivation

The FDA-sponsored label or publication has been known under a number of synonyms such as, "package stuffers," "package insert," "drug package insert," "The Regulatory Monograph," "drug insert," as well as some which in deference to good taste won't be mentioned here. It will, for the purpose of this article be referred to as the Drug Insert (DI).

The DI is derived from data submited to the FDA by pharmaceutical firms and investigators (not necessarily MDs) in support of a new drug application. It is considered by the FDA to be a part of the label even though it is not physically attached to the container itself. The FDA further insists that the same factual information in the DI is also contained in any advertisement of the product.

The FDA cannot require a firm to include a new use for the drug product in the insert, even if it has been clinically tested and found useful for a given problem. Reasons for this include economic considerations and the fact that any advertised usage must, of course, be legally binding on the company and must have prior approval of the FDA through its bureaucratic mechanism.[4] An interesting editorial in the *Journal of Legal Medicine* relates the FDA commissioner's desire to extend the use of the DI in oral contraceptives to all prescriptions. "This step," he indicated, "would be an implementation of legal, medical, moral and ethical motivation for obtaining 'informed patient consent' and is a convenient way of involving the patient along with the physician in certain benefit-risk decisions."[5]

The Government's Liability

Even though the FDA oversees the publication of the DI, sets rigid guidelines for it, and can object to any or all portions of it, it disclaims any legal responsibility for it. The FDA further states that no action of malpractice can be initiated against the FDA on the basis of claims resulting from events relating to the DI. While the FDA claims that none of its pronouncements regarding the DI are legally binding on the agency, it may be so on a defendant physician, hospital or pharmaceutical firm.[6] The government, thus, as commonly occurs, proclaims itself to be in the best of all possible worlds.

The Physician's Liability

Even though a number of statements by governmental officials and articles in the medical literature repeatedly state that the DI has no legal bearing on a physician's practice of medicine or surgery, it behooves the prudent physician to know the insert's contents and to be able to defend any deviating usage. The government's position is that if the physician deviates in his usage of a drug outside the limits of the DI, he should be aware the FDA hasn't established a scientific basis for his doing so.[7] It is important to remember the FDA has no statutory authority to regulate the practice of medicine. The FDA has the authority to control the manufacture, distribution and advertisement of drugs, but not the manner in which they are used by the physician.[8]

The real power of the drug insert on the practicing physician is in the malpractice area where it has been used in lieu of expert witness.[9] As Neil Chayet, lecturer in legal medicine at Boston and Tufts medical schools, says, "It is not absolutely binding on the physician, but it imposes on him that heavy burden to show that he was medically correct,. . . . It's the most powerful courtroom evidence against him."[10] Some drug inserts of the same drug made by different suppliers may have different prescribing dosages, limitations, and precautions. A physician is held liable if an adverse reaction occurs even though the specific drug insert doesn't carry that specific warning or counter indication.[11]

Legal opinion has further been established that if a physician is unaware of the possibility of a drug causing a reaction, he is not exempt from liability even though the specific fact is not a matter of common knowledge.[12]

Outlook and Summary

We have therefore seen how in a relatively few years the federal government has gone from the good intention of protecting the public from improper or dangerous drugs to that of the step-wise control of the practice of medicine by overt methods.

The federal government will continue to utilize drug inserts as a means of further control of medicine unless a means is obtained of redefining the functions of it. Mr. Chayet suggests that "It should be used as a guide, not as a binding directive . . . It should state clearly that the listed indications and contra-indications are for the physician's guidance and do not exclude other uses if these are fully justified. It should contain a built-in disclaimer."[13]

In Michigan, many physicians and surgeons, such as those specializing in plastic surgery and ear, nose and throat have voiced concern over the statement contained in a drug insert for a local anesthetic in that its use is contra-indicated in many areas of the body, such as ears, nose and fingers. However, many physicians commonly use it for reconstructive or other procedures in those areas. Some of these specialists have gone so far as to state that unless the drug insert is corrected, the product in question should be boycotted by them and the company so advised of their reasons for doing so.[14]

Whatever the outcome of the present controversy over the medical legal implications of the drug insert, it seems that this might well be a topic for consideration by the MSMS Professional Liability Committee to give guidance not only to the membership for the State of Michigan, but to the AMA as well.

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Credits: The assistance on bibliography by Mr. L. U. King of the Upjohn Co., Kalamazoo, MI. has been greatly appreciated.

Footnotes

1. XI
2. I
3. I
4. I, III, VIII
5. Editorial, "Journal of Legal Medicine," Vol 2, No. 1, Jan-Feb., 1974, p. 6.
6. I
7. II
8. III, VII, V, IV
9. VII
10. VII Ibid
11. I
12. I, XIII
13. VII
14. Personal Communication

Independent Survey Reveals Confusion On Generic Substitution

A new law allowing Michigan pharmacists to substitute a generic equivalent drug for a brand name drug prescribed by a physician, with the intent of reducing the cost of drugs to the consumer, may not achieve that goal, according to Raymond Stewart, director of Professional Research Analysts, an independent research agency in Chicago.

In the opinion of many of the 150 Michigan physicians and 62 pharmacists surveyed, the new law, which took effect April 1, is generally confusing and not likely to attain any significant savings for patients.

According to the provisions of this law, the pharmacist must dispense the brand name drug as written if the physician writes "DAW" on the prescription, directing that it be "Dispensed As Written." Yet, nearly half of the internists interviewed, for example, do not know the meaning of "DAW."

While responding physicians were not certain that they would remember to write "DAW" every time they wanted a prescription to be dispensed exactly as written, they were indeed certain that the medications they prescribe for their patients are what they want their patients to receive from the pharmacy.

Many of the surveyed physicians feel that the pharmacist will still telephone, as in the past, to obtain the doctor's consent whenever substitution of a generic drug is considered. Some of the physicians are not opposed to the substitution of some generic drugs, which are truly chemically equivalent to the prescribed drug and, as they have in the past, will allow this substitution to be made when permission is requested of them. However, these same physicians say they do not prescribe a drug unless they feel it is needed and they do not intend that the prescribed treatment be changed.

Of the pharmacists interviewed, only one-third had talked with someone about the provisions of the new bill *before* it was passed. However, only a small percentage now say they feel the bill will save money for the patient. They stated that the generic equivalents they plan to dispense would be quality products from major companies, close to the price of branded drugs.

Copies of this study, which include verbatim comments of respondents, a copy of the law, and a number of other pertinent communications are available from MSMS.

MDMH Statement Describes State Use Of Psychoactive Drugs

Recent news reports have raised questions regarding the use of drugs in treatment programs for the mentally ill and mentally retarded. Attached is a statement of Michigan Department of Mental Health policy concerning this subject.

The advent of the "tranquilizer" drugs in the early 1950's produced a treatment revolution in psychiatry and, perhaps more than any single factor, has helped to shape today's treatment programs for the mentally ill and many mentally retarded persons with neurological and/or behavioral disorders.

In the more than two decades which have elapsed, a series of psychoactive drugs have been introduced in a variety of forms and strengths. These drugs now constitute a substantive part of many patients' treatment programs. They are widely used for specific beneficial treatment programs throughout the western world, both by psychiatrists and other physicians employed by public agencies and by practitioners in private practice.

There is no doubt that the use of psychoactive drugs is an essential part of medical treatment, leading to more normal health and well-being for many individuals with psychiatric or learning problems. Specific safeguards have been taken by the Department of Mental Health and its agencies to ensure that all medications are used solely for beneficial therapeutic reasons.

These drugs are not appropriately used when utilized to control behavior for other than therapeutic reasons:

1. All medications, including psychoactive drugs, are ordered by a licensed physician for each individual who requires such a drug as an adjunct to that individual's total treatment plan. Careful monitoring of the patient is done by the physician to review progress, to determine continuing need for the drug, and to ensure drug safety.
2. All of the Department's institutions have licensed pharmacists who dispense medications on a prescription basis for use to meet an individual's specific need.
3. Only authorized and trained nursing personnel administer medications.
4. All medication is appropriately kept in locked medication cabinets or medication rooms in our institutions.

The number of individuals receiving psychoactive drugs in our state institutions in any one day is dependent upon the specific medical requirements of each individual's treatment need. This medical need for such a drug to be administered is determined by the judgement of the physician on an individual need basis.

Impaired Physicians Now May Find Help Through MSMS Program

The MSMS Committee to Assist Impaired Physicians (those with problems of mental illness, alcohol or drug abuse) formally announces in this issue of *Michigan Medicine* its plans to help such physicians.

The plan was drawn up in two years of deliberations, first by the Committee on Alcohol and Drug Dependency, and then by the Committee to Assist Impaired Physicians. The latter committee asked those county medical societies who had the capability to make arrangements to help impaired physicians in their areas and to make their plans known to the committee.

The MSMS plan now is ready to be put into action. Any Michigan physicians aware of colleagues with problems are asked to contact Mrs. Davis at MSMS headquarters (517/337-1351). She will put the callers in touch with committee members for further action.

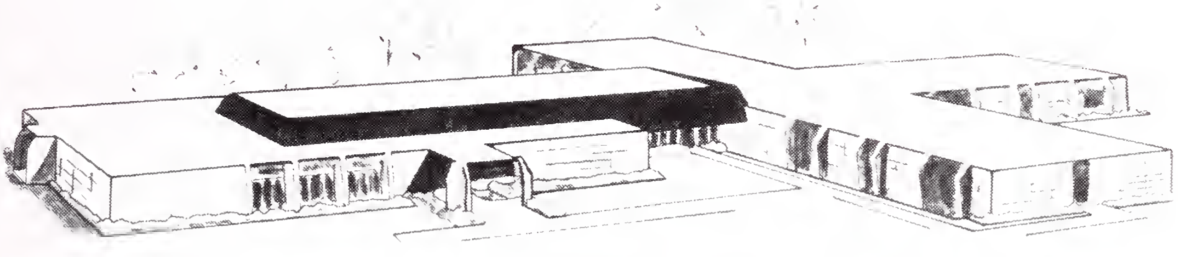
Following is the outline of the committee's plan;

General Principles

The policy concerning physicians whose capacity to function professionally has been impaired puts MSMS on record as:

1. Being motivated in this area by humanitarian concerns for the public and the impaired physician.
2. Recognizing that alcoholism, drug abuse and mental illness represent forms of physician impairment that are chronically ignored or untreated.
3. Recognizing that alcoholism, drug abuse, and mental illnesses are treatable conditions.
4. Recognizing as practitioners of the healing arts we, more than any other group should favor the treatment and/or rehabilitation of our afflicted colleagues above any other alternative.
5. Encouraging all impaired physicians to seek help and cooperate in treatment by all means at MSMS disposal.
6. Favoring the earliest possible intervention in cases of physician impairment while personal, financial, mental and physical resources are intact and minimum damage has been done to their profes-

FOREST VIEW PSYCHIATRIC HOSPITAL



Charles L. Callaway MD, Medical Director

Located on six beautifully wooded acres, *FOREST VIEW HOSPITAL* is Michigan's newest private psychiatric facility, specializing in short term intensive treatment. Comprehensive adjunctive therapy, including occupational and recreational therapy is emphasized. The prime goal of the hospital personnel is to aid the patient in coping with his illness and return him to community life as soon as possible. Licensed by the State of Michigan, Department of Mental Health, Accredited by the Joint Commission of Accredation of Hospitals, Participant in Medicare and Medicaid.

Full Blue Cross participation.

4520 Cascade Rd. SE
Grand Rapids, Michigan 49506
Michael H. Payne, Administrator
616-942-9610

sional reputation or the public even if such intervention requires the use of constructive coercion.

7. Favoring the preservation or the restoration of valuable and experienced health manpower whenever possible.
8. Recognizing as most other professional and employee groups that while impaired individuals represent a liability to their peers, employers, colleagues, and the public, they also have the right to employment or to practice their profession without penalty or sanctions when not impaired.
9. Stating all MSMS actions taken on behalf of the impaired physician will be done in such a manner as to preserve unimpaired that physician's right to continue practice without restrictions or stigma upon recovery or remission.
10. Stating that all actions taken in the area of impaired physicians by MSMS are intended in the best interests of the physician and the public and are not designed to be punitive in nature since the best current evidence indicates none of these conditions are voluntarily acquired or "self-inflicted."
11. Punitive sanctions will only be considered where the impaired physician's actions endanger the public or himself, and he refuses assistance.

Implementation Of General Principles

A. Education

The Michigan State Medical Society will direct an educational program targeted on key case-finding resources. These resources will include the public, society members, physicians, physicians' spouses, office assistants, nurses, pharmacists, hospital administrators and other allied health care personnel as well as groups responsible for monitoring physician performance for hospitals, clinics, health insurance carriers, physician organizations and county medical societies. This educational effort will emphasize the following:

1. Alcoholism, drug dependence, mental illness, the major untreated causes of physician impairment because of personal denial or social and professional stigma are remediable conditions.
2. Treatment and rehabilitation personnel and facilities skilled in these areas do exist and have a good success record.
3. These conditions are no more "self-inflicted" than diabetes or heart disease and there is an urgent need for all of us to clarify and reorient our thinking and values in these areas.

impotence
is driving them apart
Android®-25 Tablets
Android-10 Tablets Android-5 Buccal
Methyltestosterone N.F. –25, 10, 5 mg.

For the treatment of impotence due to androgenic deficiency in the male.

DESCRIPTION: Methyltestosterone is 17β-Hydroxy-17-Methylandrost-4-en-3-one. **ACTIONS:** Methyltestosterone is an oil soluble androgenic hormone. **INDICATIONS:** In the male: 1. Eunuchoidism and eunichism. 2. Male climacteric symptoms when these are secondary to endrogen deficiency. 3. Impotence due to androgenic deficiency. 4. Postpuberal cryptorchidism with evidence of hypogonadism. Cholestatic hepatitis with jaundice and altered liver function tests, such as increased BSP retention and rises in SGOT levels, have been reported after Methyltestosterone. These changes appear to be related to dosage of the drug. Therefore, in the presence of any changes in liver function tests, drug should be discontinued. **PRECAUTIONS:** Prolonged dosage of androgen may result in sodium and fluid retention. This may present a problem, especially in patients with compromised cardiac reserve or renal disease. In treating males for symptoms of climacteric, avoid stimulation to the point of increasing the nervous, mental, and physical activities beyond the patient's cardiovascular capacity. **CONTRAINDICATIONS:** Contraindicated in persons with known or suspected carcinoma of the prostate and in carcinoma of the male breast. Contraindicated in the presence of severe liver damage. **WARNINGS:** If priapism or other signs of excessive sexual stimulation develop, discontinue therapy. In the male, prolonged administration or excessive dosage may cause inhibition of testicular function, with resultant oligospermia and decrease in ejaculatory volume. Use cautiously in young boys to avoid premature epiphyseal closure or precocious sexual development. Hypersensitivity and gynecomastia may occur rarely. PBI may be decreased in patients taking androgens. Hypercalcemia may occur, particularly during therapy for metastatic breast carcinoma. If this occurs, the drug should be discontinued. **ADVERSE REACTIONS:** Cholestatic jaundice • Oligospermia and decreased ejaculatory volume • Hypercalcemia particularly in patients with metastatic breast carcinoma. This usually indicates progression of bone metastases • Sodium and water retention • Priapism • Virilization in female patients • Hypersensitivity and gynecomastia. **DOSAGE AND ADMINISTRATION:** Dosage must be strictly individualized, as patients vary widely in requirements. Daily requirements are best administered in divided doses. The following is suggested as an average daily dosage guide. In the male: Eunuchoidism and eunuchism, 10 to 40 mg.; Male climacteric symptoms and impotence due to androgen deficiency, 10 to 40 mg.; Postpuberal cryptorchism, 30 mg. **HOW SUPPLIED:** 5, 10, 25 mg. in bottles of 60, 250.

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4. The practicing impaired physician is a public hazard and those who knowingly permit him to continue share ethically in responsibility for any harm done.
5. The practicing impaired physician by the very nature of his impairment, social climate, and external pressures may find it impossible to make rational sound judgements on his behalf.
6. Early intervention even if requiring constructive coercion preserves physical, financial, mental and personal resources vital to a rapid recovery and successful long term rehabilitation.
7. The use of positive benevolent coercion in such cases is a proven, tested technique of early intervention.
8. All MSMS activities in the area of the impaired physician are intended to prevent loss of — and to preserve — professional careers that are costly to replace.
9. All MSMS activities in this area are nonpunitive and designed to preserve the involved physician's reputation and ability to practice quality medicine.
10. To ignore the impaired physician is to turn our backs on our commonly-shared public responsibility to provide high quality health care.
11. To ignore the impaired physician runs counter to our humanitarian responsibilities to any ill or struggling colleague, and the public he serves.

B. Information and Referral

The Michigan State Medical Society will establish contact with the best appropriate local, regional, state and national facilities and therapists in the areas of alcoholism, drug abuse, mental health and geriatrics. The Michigan State Medical Society will maintain currently updated information concerning available treatment resources. Within reasonable limits MSMS will evaluate these resources and where possible be able to provide informed judgments as to their strengths and weaknesses. MSMS will maintain ongoing liaison with these resources. MSMS when called upon will be able to supply current factual information concerning these impairing conditions and be able to make knowledgeable referrals to effective treatment resources. In pursuing these goals certain recognized sources of information and updating will be made available to MSMS. Among these sources will be periodicals, journals, association memberships, and attendance at various seminars and schools concerning these problems where appropriate.

Anabolic Stimulant
Increased Muscular Tone
Osteoporosis

EACH ANDROID-G TABLET CONTAINS:

Ethinyl Estradiol	0.005 mg
Methyltestosterone	1.25 mg
L-lysine	100 mg
Nicotinic Acid	12.5 mg
Iron (from Ferrous Sulfate)	2.82 mg
Vitamin A	2,500 U.S.P. Units
Vitamin D	250 U.S.P. Units
Thiamine Mononitrate	2.5 mg
Riboflavin	2.5 mg
Ascorbic Acid	25.0 mg
Folic Acid	0.1 mg
Vitamin B-12	1.5 mcg
Methionine	12 mg
Choline Bitartrate	15 mg
Inositol	10 mg
Calcium Pantothenate	2.5 mg
Pyridoxine	0.25 mg
Copper (from Copper Sulfate)	0.25 mg
Zinc (from Zinc Oxide)	0.25 mg
Iodine (from Potassium Iodide	0.075 mg
Calcium (from Dicalcium Phosphate	72.5 mg
Phosphorus (from Dicalcium Phosphate)	55 mg
Potassium (from Potassium Sulfate)	2.5 mg
Manganese (from Manganese Sulfate)	0.5 mg
Magnesium (from Magnesium Sulfate)	0.5 mg

ACTION AND USES — DOSAGE: 1 tablet after breakfast and supper, or as required. In females, 3-week courses of therapy are recommended followed by a 1-week rest period. Withdrawal bleeding may occur during the rest period. **PRECAUTIONS**: Administer cautiously to female patients who tend to develop excessive hair growth or other signs of masculinization. **CONTRAINDICATIONS**: Patients in whom estrogen or androgen therapy should not be used, as in carcinoma of the breast, genital tract, or prostate, and in patients with a familial tendency to these types of malignancy. **AVAILABLE:** Bottles of 100 and 500 tablets. Rx only.

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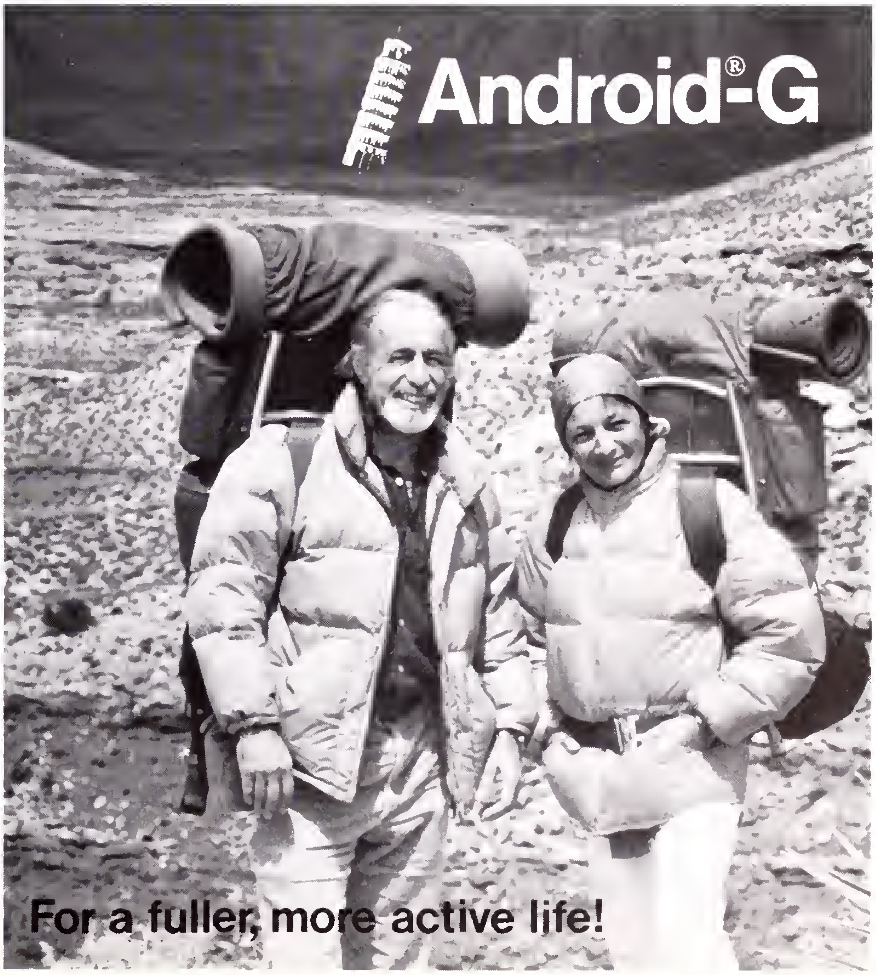
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C. Service Guidelines

The following recommended guidelines should be implemented by the county medical society in rendering direct assistance to the impaired physician, whether or not he is a member of the Michigan State Medical Society. The Michigan State Medical Society will provide consultative services through its Committee to Assist Impaired Physicians in support of or in aiding the county medical society in carrying out these functions.

Phase I. Referral

1. Where appropriate, there should be designated within the county medical society a specific body to which impaired physicians can be referred by case finding resources.
2. Case-finding resources and information divulged will be considered privileged.

Phase II. Evaluation

1. The county medical society will evaluate the degree of impairment in a discreet and low-profile fashion, recognizing that a physician's reputation is as important to his livelihood as his skills.
2. This evaluation should make as much use as possible of first-hand information concerning specific incidents of demonstrated functional impairment.
3. All such information gathered will be completely privileged and considered as protected confidentiality under Michigan law.

Phase III. Intervention

1. Where evidence exists of a physician's impaired ability to function professionally the county medical society will select an "intervention team." This team need not be made up entirely of society members. It is strongly recommended that this team not be involved in the treatment itself.

   Examples of such intervention teams might be:

   1) An appropriate specialist, a physician who has recovered from a similar problem, and a county society member;
   OR
   2) A hospital staff executive, county medical society ethics committee member, and a local professional who has recovered from a similar problem. The local professional need not necessarily be a physician;
   OR
   3) Similar composition to Example 2 made up entirely of hospital or clinic staff members.
2. The intervention team will, within a reasonable time period:
   - A. Meet with the impaired physician with documentation that impairment does exist, is noticed, and concerns his colleagues.
   - B. Encourage the impaired physician to voluntarily seek help.
   - C. Maintain contact with the impaired physician to support and encourage his continued cooperation in his treatment.
   - D. Where there is failure to seek or cooperate in treatment after a reasonable length of time, this fact should be reported to the appropriate county society

(Continued on page 420)

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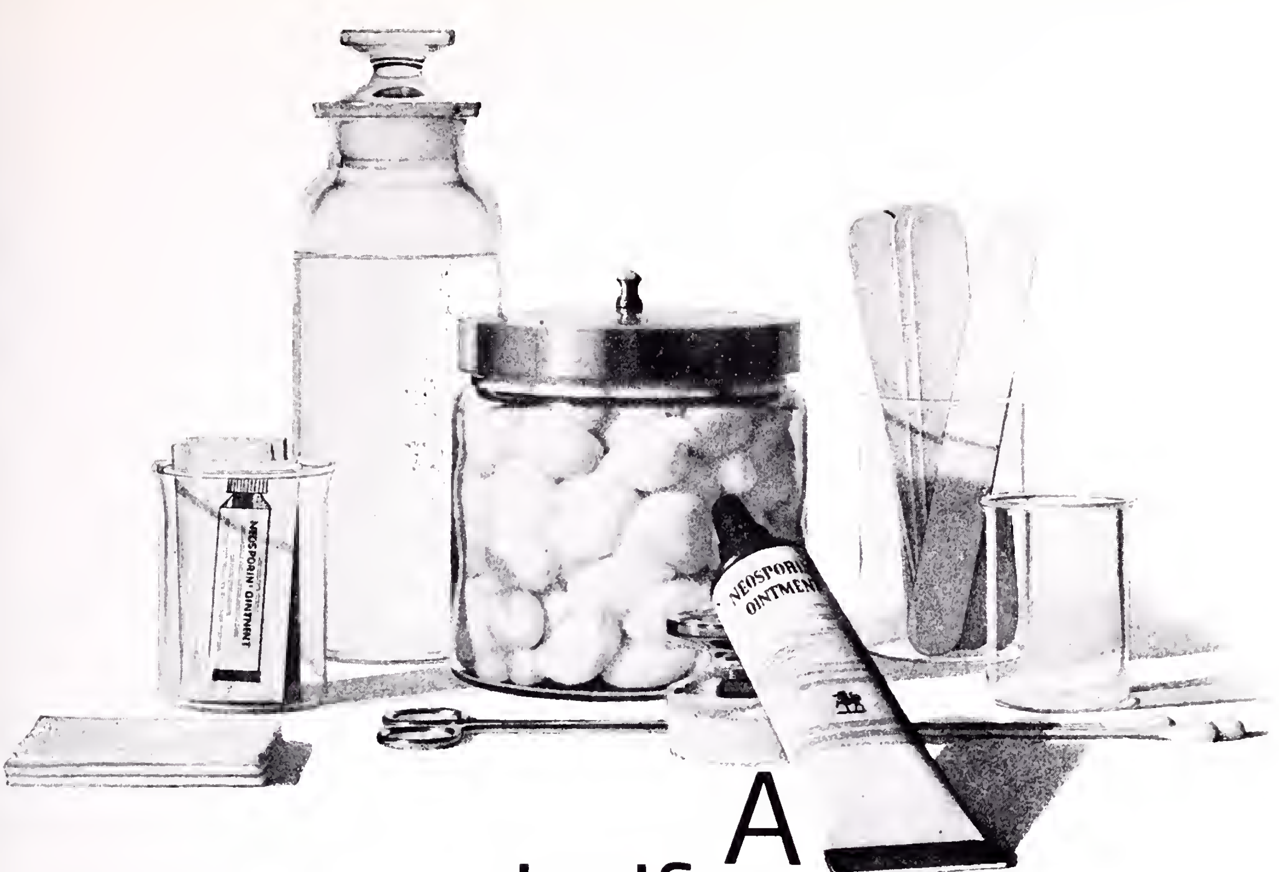

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Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs. In tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: *Therapeutically,* used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

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* WARNING
This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Indications: *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics).** If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

'DYAZIDE'

Just once or twice daily for maintenance. Hydrochlorothiazide to help keep blood pressure down and triamterene to help keep potassium levels up.

Commentary

Unless They're Hospitalized

Let's Eliminate Mood-Changing Drugs For People Under 30

By Richard C. Bates, MD
Lansing

Practicing physicians often make the assumption that, by and large, patients are truthful and trustworthy. We also tend to believe that our great insights into human thinking and behavior give us unusual skills in detecting those who might try to hoodwink us.

While these attitudes are precious insofar as they help us to be friendly and close to our clientele, they can also make us look like stupid, gullible push-overs to young people in the drug set.

A public health worker in the Upper Peninsula has recently estimated that as many as half the youngsters under 30 there who abuse drugs are obtaining them from physicians by presenting themselves as having backaches or other difficult-to-document complaints for which they request analgesics. They often visit several physicians a day, saving for themselves half the drugs they obtain and selling the rest at profits that more than repay their expenses.

In the central Michigan area, upon complaints from parents, several physicians have recently been investigated as sources for large amounts of both stimulant and sedative drugs. In the investigation, disguised police officers have found it easy to obtain amphetamines by presenting themselves as truck drivers who want help in staying awake. In several instances these investigators have then been able to obtain barbiturates to counteract their amphetamines, to obtain prescriptions from office nurses without seeing the doctor and, even, to obtain additional prescriptions for spurious "friends."

Doctor Bates is a contributing editor of Medical Economics and a private practitioner.

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COMMENTARY/*Continued*

A recent court ruling accurately states that there is no Michigan law to require that patients have a physical examination before they may be given prescriptions for controlled substances. Indeed, dentists may obtain licenses that permit them to disperse narcotics. Such gaps in the law are badly in need of being plugged. There remains a moral and professional obligation to avoid being "used" and duped by addicts. The traffic in legal drugs is frightening enough: it scarcely needs augmentation by what appear to be significant quantities of legal drugs that leak into the street through cracks of our gullibility.

Young people are generally healthy. Little harm would be done were we to resolve never to dispense or prescribe controlled substances or mood-altering drugs to anyone under 30 unless he or she were hospitalized.

IMPAIRED PHYSICIANS/*Continued*

body, by the intervention team.

3. Where these efforts of the intervention team have failed, the county society will bring constructive pressure to bear on the impaired physician to encourage treatment through benevolent coercion:
   - A. Through staff sanctions in hospitals.
   - B. Through available forms of peer pressure, including censure by organized medical societies, still maintaining low profile and confidentiality to protect the impaired physician's reputation and earning power and the profession's public image.
4. Where all efforts fail and the degree of impaired professional function threatens the public or physician's health, the matter will be referred by the county society to the Michigan Medical Practice Board.

Physicians Urgently Needed For Indian Health Service

The Aberdeen Area Indian Health Sevice, responsible for the health of Michigan Indians, is in urgent need of full-time physicians to staff hospitals and health centers in the Dakotas, Minnesota and Nebraska. Specific vacancies may be learned of by contacting Edward White, Physician Recruitment, Aberdeen Area Indian Health Service, Federal Building, Aberdeen, S.D., 54401. Physicians may enter the Indian Health Service through the U.S. Public Health Service Commissioned Corps system, with pay and benefits commensurate with educational and professional experience, or they may enter through Civil Service appointment procedures. Physicians in both categories are not required to purchase malpractice insurance.

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August 11-12-13, 1975

Park Place Motor Inn, Traverse City, Michigan

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In Memoriam

Harold R. Oberhill, MD
Dowagiac

Former associate professor of neurological surgery at Northwestern University who established private practice in Dowagiac in 1972, Harold R. Oberhill, MD, died May 5 at the age of 58. Doctor Oberhill was past president of the Chicago and Central Neurosurgical Societies, former member of the AMA Congress of Neurological Surgeons and past chairman of the admissions committee of the Harvey Cushing Society. He was a graduate of the University of Illinois College of Medicine and had been affiliated with the Chicago Wesley Memorial Hospital.

Ralph H. Ruhmkorff, MD
Potomac, Md.

Former Michigan State University student health service physician Ralph Henry Ruhmkorff, MD, died May 20 at the age of 73. He had been residing in Potomac, Md. Doctor Ruhmkorff was a graduate of Loyola University School of Medicine and was in general practice in Indiana before coming to Michigan in the late 1950's. He was past president of the Jasper-Newton County Medical Society in Indiana.

Michael H. Jayson, MD
Marlette

Marlette radiologist Michael Harold Jayson, MD, died April 2 at the age of 58. He had been affiliated with community hospitals in Marlette, Yale, Deckerville, Hubbard, Bad Axe and Cass City. He was past president of the Arenac County Medical Society and was a graduate of The University of Michigan. In addition, he was a member of the Michigan and North American radiological societies.

Joseph S. McCarthy, MD
Kalamazoo

Long-time Kalamazoo State Hospital psychiatrist Joseph S. McCarthy, MD, died May 18 at the age of 81. He was former vice president of the Kalamazoo Academy of Medicine and had been affiliated also with Borgess Hospital. He was a graduate of Creighton University medical school. He also had directed the Adult Mental Health Clinic in Marquette for a time.

Reuben J. Mendelssohn, MD
Farmington Hills

A Detroit-area physician for more than 50 years, Reuben J. Mendelssohn, MD, died May 23 at the age of 73. Doctor Mendelssohn was graduated from the Detroit College of Medicine and was on the staffs of Saratoga and Deaconess Hospitals. He was a member of the American Society of Abdominal Surgeons and the International College of Surgeons.

Edwin J. Hammer, MD
Grosse Pointe Park

Retired Detroit-area physician Edwin John Hammer, MD, died May 10 of an auto accident. Doctor Hammer was 65. He was former director and past president of Saratoga General Hospital and a past president of the Central and East Side Detroit medical societies. He had been affiliated with Saratoga, Grace and Cottage hospitals and was a graduate of the University of Michigan. He was a fellow of the American College of Surgeons.

Lona B. Carroll, MD
Grosse Pointe Park

Lona B. Carroll, MD, who retired in 1972 as the oldest practicing woman physician in Michigan, died May 23 at the age of 90. Doctor Carroll was a native of New Brunswick and a graduate of the University of Michigan Medical School. In 1964 she established the U-M Carroll fund for research in glaucoma and related eye diseases, in memory of her late husband. She had been affiliated with Hutzel, Bon Secours, Children's, Crittenton and Providence Hospitals.

William J. Wertz, MD
Detroit

Director of the Detroit Psychiatric Institute and associate professor of psychiatry at Wayne State University, William J. Wertz, MD, died May 13 at the age of 57. Doctor Wertz also was associate clinical director of the Detroit General Hospital Department of Psychiatry. He was a graduate of Meharry Medical College, a fellow of the American Psychiatric Association, diplomate of the American Board of Psychiatry and Neurology, and member of the Michigan Psychiatric Society.

Correction

Edward I. Mintz, MD, former Detroit obstetrician-gynecologist, is retired and residing in Bal Harbour, Florida. Erroneous reports to MSMS recently listed him as deceased. The editors of *Michigan Medicine* deeply regret publication of an obituary to that effect in the May issue.

(Continued on page 426)

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Raymond E. Hillmer, MD
Copra Lane, Fla.

Retired Baraga County physician Raymond E. Hillmer, MD, died April 1 at the age of 90. Doctor Hillmer was a graduate of Stritch School of Medicine at Loyola University and had been medical officer for the Copper Range Company for 30 years. In 1963 he received the MSMS 50-year award.

Else Kolhede
Grosse Pointe

Executive Secretary of the Wayne County Medical Society since 1942, Else Kolhede died April 27 at the age of 63. Miss Kolhede also was secretary of the Wayne County Health Foundation. She was a member of the American Association of Medical Society Executives, the Founders Club of the Detroit Institute of Arts and the Walsh Institute of Accountancy Alumni Club.

Harold W. Stubbs, MD
Bloomfield Hills

Harold William Stubbs, MD, Highland Park physician for 45 years, died April 9 at the age of 82. Doctor Stubbs was a graduate of Wayne State University School of Medicine and was an opthamologist-otorhinolaryngologist. He was affiliated with Highland Park Central and Woodward General hospitals.

Henry A. Scovill, MD
Ypsilanti

Henry A. Scovill, MD, former chief of staff of Ypsilanti's Beyer Memorial Hospital and an Ypsilanti physician for 23 years, died April 8 at the age of 69. Doctor Scovill was a lifelong Ypsilanti resident and a graduate of the University of Michigan Medical School. He was past president of the Washtenaw County Medical Society and delegate to MSMS. He had been a long-time member of the Washtenaw County Mental Health Board. He was a deputy medical examiner for Washtenaw County and a Federal Aviation Administration examiner.

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For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.

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Neither the editors nor the state medical society will accept responsibility for statements made or opinions expressed by any contributor in any article or feature published in the pages of the journal. In editorials, the views expressed are those of the writer and not necessarily official positions of the society.

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President's Page

We have our legislative package. Michigan's physicians have scored a major victory with the passage of 13 of the 16 bills they proposed and/or supported to improve the professional liability litigation climate.

A year ago, when plans were laid for the coming legislative sessions, such success was thought impossible. But physicians united through MSMS and the Physicians Crisis Committee; worked with the governor's office, labor, the state bar, insurance bureau and legislators; roused the public and accomplished the feat.

The new legislation should reduce courtroom exposure and suit risk, assure availability of insurance, moderate attorney fees, strengthen and finance the Medical Practice Board and provide a good climate for fiscal integrity of the new MSMS-sponsored liability company.

But Gov. Milliken put things in perspective when he declared, "We have resolved the short-term crisis in availability of insurance and laid the groundwork for the long-term solutions to the medical malpractice insurance problem."

For the long-term problems have yet to be resolved.

Michigan physicians will work to improve the quality of care through education, better self-policing and improved doctor-patient relationships. And MSMS leaders, staff and insurance company executives will work to bring down the cost of doctors' insurance.

Every day doctors ask me what is being done to lower their premiums.

Holding down the costs and making insurance available are the reasons for the new MSMS-sponsored Michigan Physicians Mutual Liability Company.

Initially, it is hoped premium rates will be competitive with those of the state's malpractice insurance program. As the MSMS company progresses in experience and financial soundness, any profits will be applied to building reserves and then to lower premiums.

And in every other way possible, efforts of the company will be aimed at reducing and holding down costs.

The most efficient claims review mechanisms will be put into effect, with final determination to be made by physicians as to the legitimacy of claims. Aggressive efforts will be made to defend and thus to discourage cases filed without merit against physicians. A continuing educational campaign to help doctors protect themselves against suits and provide the best possible patient care will be emphasized. Efficient management will be a cornerstone of the mutual approach.

We must be honest and realize that costs to the doctor are not going to be reduced immediately because some new laws have been written or because we will have a physician-controlled company.

But the campaign is underway and "Reduce the Cost" is the battlecry.

(This President's Page article is neither an offer to sell nor a solicitation of an offer to buy any of the securities of the Michigan Physicians Mutual Liability Company. Such offerings are made only by the MPMLC prospectus. Its securities are offered for sale only in the State of Michigan to bona fide residents of Michigan and are not for resale to non-residents of Michigan.)

Brock E. Brush, MD
MSMS President

Michigan's Doctor Slagle New AMA Veep

Doctor Slagle

George W. Slagle, MD, Battle Creek, new vice president of the AMA, modestly asserts that he's particularly happy for Michigan with the honor that's been bestowed upon him.

"I'm looking forward to all the duties," says Doctor Slagle, who will be traveling to national meetings, testifying before Congress and visiting state societies. Dr. Slagle was elected at the AMA Annual Convention June 15-19 in Atlantic City and would succeed to the presidency in the event of death or incapacity.

Doctor Slagle lists four major priorities for the AMA in the coming year: (1) Helping settle the malpractice insurance problem; (2) Getting the AMA's finances on a sound, stable basis; (3) "Fighting the government every chance we have to prevent intrusions in the physician-patient relationship," and (4) Reducing membership losses.

"It looks like the AMA's financial condition is going to come out strong," Doctor Slagle says. "The tremendous majority of delegates at the convention were in favor of the board's request for the dues raise to $250 and clearly overruled the reference committee which recommended a maximum of $225. That was a good indication of the delegates' approval of the board and its hard work to reorganize and cut back wherever necessary.

"This cutting back will be continued in the future," Doctor Slagle said. "As new moneys come in, better programs will be started, basically to the benefit of the grass-roots physician. I will do everything in my power to remember and support what my constituency wants."

Dr. Slagle spoke off-the-cuff from his office in Battle Creek, where he has been in private practice since 1937. He is active in civic affairs and currently is organizing local professional and business leaders to recruit new doctors for the area.

Dr. Slagle is the son and grandson of physicians. His brother and two nephews are Ohio physicians.

A former MSMS and Calhoun County Medical Society president, Doctor Slagle served 10 years on the AMA Council on Medical Service and as its chairman from 1967 to 1969. He has been an AMA delegate since 1962 and a member of many committees. He currently is president of the AMA Organization of Presidents and Other Officers of State Medical Associations.

Doctor Slagle is current vice president of the Michigan Association of the Professions. He is a fellow of the American College of Physicians, a member of the Michigan Society of Internal Medicine, the American Society of Internal Medicine, World Medical Association, the American Heart Association and the Royal Society of Medicine in London. He is a former member of the Michigan Blue Shield board of directors.

He was decorated with six battle stars during World War II and is former chairman of the University of Michigan medical alumni.

Doctor Slagle is the first Michigan doctor to serve as vice president of the AMA since 1930-31 when Louis J. Hirschman, MD, of Detroit, was elected. He was chosen by the AMA when it met in Detroit in June of 1930. Doctor Hirschman, who later moved from Detroit to Traverse City in 1950, died in 1965 at the age of 86.

Doctor Slagle and Doctor Hirschman are both past presidents of MSMS, Doctor Slagle serving in 1957 and Doctor Hirschman in 1928.

A special forum during the AMA convention featured presentations by Doctor Slagle, seated third from left, and former MSMS President John J. Coury Jr., MD, far left.

Donald N. Sweeny, Jr., MD, Detroit, member, AMA Council on Medical Service, addresses a remark to the Special Committee of the AMA House of Delegates.

A top AMA award, the Joseph B. Goldberger Award in Clinical Nutrition, was presented to Ananda S. Prasad, MD, PhD, professor of medicine at Wayne State University and chief of hematology, Department of Medicine and senior attending, Detroit General Hospital.

Michigan Doctors At AMA Annual

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"Probably" effective: For estrogen deficiency-induced osteoporosis, and only when used in conjunction with other important therapeutic measures such as diet, calcium, physiotherapy, and good general health-promoting measures. Final classification of this indication requires further investigation.

Contraindications: Short acting estrogens are contraindicated in patients with (1) markedly impaired liver function; (2) known or suspected carcinoma of the breast, except those cases of progressing disease not amenable to surgery or irradiation occurring in women who are at least 5 years postmenopausal; (3) known or suspected estrogen-dependent neoplasia, such as carcinoma of the endometrium; (4) thromboembolic disorders, thrombophlebitis, cerebral embolism, or in patients with a past history of these conditions; (5) undiagnosed abnormal genital bleeding.
Warnings: Estrogen therapy should not be given to women with recurrent chronic mastitis or abnormal mammograms except, if in the opinion of the physician, it is warranted despite the possibility of aggravation of the mastitis or stimulation of undiagnosed estrogen-dependent neoplasia.

The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, retinal thrombosis, cerebral embolism and pulmonary embolism). If these occur or are suspected, estrogen therapy should be discontinued immediately.

Estrogens may be excreted in the mother's milk and an estrogenic effect upon the infant has been described. The long range effect on the nursing infant cannot be determined at this time.

Hypercalcemia may occur in as many as 15 percent of breast cancer patients with metastases, and this usually indicates progression of bone metastases. This occurrence depends neither on dose nor on immobilization. In the presence of progression of the cancer or hypercalcemia, estrogen administration should be stopped.

A statistically significant association has been reported between maternal ingestion of diethylstilbestrol during pregnancy and the occurrence of vaginal carcinoma in the offspring. This occurred with the use of diethylstilbestrol for the treatment of threatened abortion or high risk pregnancies. Whether or not such an association is applicable to all estrogens is not known at this time. In view of this finding, however, the use of any estrogen in pregnancy is not recommended.

Failure to control abnormal uterine bleeding or unexpected recurrence is an indication for curettage.
Precautions: As with all short acting estrogens, the following precautions should be observed:

A complete pretreatment physical examination should be performed with special reference to pelvic and breast examinations.

To avoid prolonged stimulation of the endometrium and breasts in climacteric or hypogonadal women, estrogens should be administered cyclically (3 week regimen with 1 week rest period—withdrawal bleeding may occur during rest period).

Because of individual variation in endogenous estrogen production, relative overdosage may occur which could cause undesirable effects such as abnormal or excessive uterine bleeding, mastodynia and edema.

Because of salt and water retention associated with estrogenic anabolic activity, estrogens should be used with caution in patients with epilepsy, migraine, asthma, cardiac, or renal disease.

If unexplained or excessive vaginal bleeding should occur, reexamination should be made for organic pathology.

Pre-existing uterine fibromyomata may increase in size while using estrogens; therefore, patients should be examined at regular intervals while receiving estrogenic therapy.

The pathologist should be advised of estrogen therapy when relevant specimens are submitted.

Because of their effects on epiphyseal closure, estrogens should be used judiciously in young patients in whom bone growth is incomplete.

Prolonged high dosages of estrogens will inhibit anterior pituitary functions. This should be borne in mind when treating patients in whom fertility is desired.

The age of the patient constitutes no absolute limiting factor, although treatment with estrogens may mask the onset of the climacteric.

Certain liver and endocrine function tests may be affected by exogenous estrogen administration. If test results are abnormal in a patient taking estrogen, they should be repeated after estrogen has been withdrawn for one cycle.
Adverse Reactions: The following adverse reactions have been reported associated with short acting estrogen administration:

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gastrointestinal symptoms such as abdominal cramps and bloating
breakthrough bleeding, spotting, unusually heavy withdrawal bleeding (See DOSAGE AND ADMINISTRATION)
breast tenderness and enlargement
reactivation of endometriosis
possible diminution of lactation when given immediately postpartum
loss of libido and gynecomastia in males
edema
aggravation of migraine headaches
change in body weight (increase, decrease)
headache
allergic rash
hepatic cutaneous porphyria becoming manifest

Dosage and Administration: PREMARIN should be administered cyclically (3 weeks of daily estrogen and 1 week off) for all indications except selected cases of carcinoma and prevention of postpartum breast engorgement.

Menopausal Syndrome—1.25 mg. daily, cyclically. Adjust dosage upward or downward according to severity of symptoms and response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

If the patient has not menstruated within the last two months or more, cyclic administration is started arbitrarily. If the patient is menstruating, cyclic administration is started on day 5 of bleeding. If breakthrough bleeding (bleeding or spotting during estrogen therapy) occurs, increase estrogen dosage as needed to stop bleeding. In the following cycle, employ the dosage level used to stop breakthrough bleeding in the previous cycle. In subsequent cycles, the estrogen dosage is gradually reduced to the lowest level which will maintain the patient symptom-free.

Postmenopause—as a protective measure against estrogen deficiency-induced degenerative changes (*e.g.* osteoporosis, atrophic vaginitis, kraurosis vulvae)—0.3 mg. to 1.25 mg. daily and cyclically. Adjust dosage to lowest effective level.

Osteoporosis (to retard progression)—usual dosage 1.25 mg. daily and cyclically.

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MEETINGS

Aug. 9-13 — Annual meeting and scientific assembly, Michigan Academy of Family Physicians, Park Place Motor Inn, Traverse City, contact: Rita Feldkamp, executive secretary, MAFP, 933 Wing St., Plymouth, 48170.

Aug. 22-24 — Second Annual Regional Meeting, International College of Surgeons, North Detroit General Hospital, contact: Meyer O. Cantor, MD, North Detroit General Hospital, 3105 Carpenter, Detroit, 48212

Sept. 5-6 — Annual Medical Meeting, sponsored by Burns Medical Clinic and Little Traverse Hospital, contact: E.N. Carpenter, MD, chairman, Burns Medical Clinic, Petoskey 49770.

Sept. 10 — Continuing Medical Education Course, "Hypertension — Detection, and Control," sponsored by medical schools at University of Michigan and Michigan State University, and CIBA Pharmaceuticals, at Park Place Motor Inn, Traverse City, contact: Robert Daugherty, MD, 238-A Life Sciences, College of Human Medicine, MSU, East Lansing, 48824.

Sept. 13 — September Seminar, "Pathology of the Breast," Michigan Society of Pathologists, St. John Hospital, Detroit, contact: Robert Hendrix, MD, Department of Pathology, University of Michigan, Ann Arbor, 48104

Sept. 17 — Annual Muskegon Trauma Day, Holiday Inn, Muskegon, contact: G. W. Annessa, MD, 1470 Peck St., Muskegon, 49441

Sept. 17-18 — "Sexual Problems in Office Practice," postgraduate seminar for family physicians and other specialists, cosponsored by Michigan Academy of Family Physicians, at Towsley Center, Ann Arbor*

Sept. 24 — The Council, MSMS headquarters, contact: Warren F. Tryloff, director

Sept. 25-27 — "Implant Surgery for Joints and Tendons in the Hand," postgraduate course, sponsored by American Society of Surgery of the Hand, at Blodgett Memorial Hospital, Grand Rapids, contact: Alfred B. Swanson, MD, course chairman, 313 Blodgett Medical Building, Grand Rapids, 49506

Sept. 30 — Annual Surgical Symposium of WSU and Children's Hospital of Michigan surgical departments, at Children's Hospital, contact: Maggie Stiegler, director, Department of Community Relations, Children's Hospital of Michigan, 3901 Beaubien Blvd., Detroit, 48201

Oct. 8-9 — Joint meeting, MSMS Committee on Maternal and Perinatal Health, Michigan Society of Ob-Gyn, and Perinatal Association of Michigan, at MEA Conference Center, St. Mary's Lake, Battle Creek, contact: Helen Schulte, MSMS headquarters

Oct. 9-10 — 1975 Mack Symposium on Physiology and Pathology of Reproduction, sponsored by WSU Department of Ob-Gyn and C.S. Mott Center for Human Growth and Reproduction, at Engineering Society of Detroit, 100 E. Farnsworth, Detroit, contact: Kamran S. Moghissi, MD, Scott Hall, WSU, 540 E. Canfield, Detroit, 48201

Oct. 14-16 — "Cardiology for Internists," postgraduate course, Towsley Center, University of Michigan*

Oct. 27-29 — "Steroid Hormone Action and Cancer," postgraduate course for basic scientists and clinicians, Towsley Center, University of Michigan*

Nov. 3-5 – Pulmonary Disease Workshop for family physicians and internists, at Towsley Center, University of Michigan*

Nov. 5 – The Council, MSMS headquarters, contact: Warren F. Tryloff, director

Nov. 6-7 – Human Sexuality workshops for health professionals, Towsley Center, University of Michigan*

Nov. 7-8 — Postgraduate conference for anesthesiologists, Towsley Center, University of Michigan*

Nov. 11-13 — 1975 MSMS Annual Scientific Meeting, Michigan Inn, Southfield, contact: Helen Schulte, MSMS headquarters

Nov. 20-22 — Postgraduate conference on plastic surgery for general surgeons, Towsley Center, University of Michigan*

Nov. 22 — "Family Practice Topics," for family physicians, cosponsored by Michigan Academy for Family Physicians, Towsley Center, University of Michigan*

Nov. 29-Dec. 4 — AMA Clinical Convention, Honolulu

Dec. 3 — "Cardiology for family physicians," postgraduate course sponsored by Michigan Academy of Family Physicians, Towsley Center, University of Michigan*

**Contact Robert K. Richards, director, Office of Intramural Education, Room 6-1109, Towsley Center for Continuing Medical Education, University of Michigan Medical Center, Ann Arbor, 48104.*

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The Wayne State University Clinics, right foreground, and the new Detroit General Hospital, left, with a connecting plaza in the middle, as depicted by artist's model. Located in the Detroit Medical Center near the WSU Medical School, the two separate but contiguous buildings will participate in shared service programs to reduce operating costs. Ground for the two structures was broken in October 1974.

Wayne State University School of Medicine in 1975

An Old Grad Asks Some Tough Questions And Gets Some Straight Answers

By Robert Coye, MD, Dean
WSU School of Medicine

Wayne State University graduates who trained at the "old medical school" at 1400 Chrysler and Receiving Hospital have lots of interesting comments and questions when they return to visit the school as it is now. Those who trained at the "old-old medical school" at St. Antoine and Mullett Street and Receiving, view us now with a profound sense of shock and astonishment.

A certain amount of change is to be expected, but WSU Medical School is in the florid phase of growth and development. I doubt that any other school has changed so much in size, facilities, and programs in the past 10 years. Some of the Old Grad's typical questions and our answers give a bird's-eye view of some of WSU's activities and plans which may be of general interest to physicians in Michigan.

Dean Coye

O.G.: I graduated in 1965 and we had 125 in our class. That's little less than half your present class size of 256. Why did you expand so much?

A.: Both the University and the state government believed additional doctors were needed in Michigan, and that Wayne State, as the only medical school in the Detroit area, could provide sound educational opportunities for this very large class if given adequate facilities and financial support.

O.G.: Has the State given you enough help to do a good job for all of these students?

A.: Yes, by and large they've supported us very well. First, they've provided facilities — we have a fine new basic science building (Scott Hall), the new Shiffman Medical Library, the Medical Research Building and of course, the University Clinics, which is under construction and will be completed in 1978. Second, the have provided extra dollars for the expansion of faculty.

O.G.: Well, size isn't everything by a long shot. Can you get enough good students and faculty?

A.: Our students are really first-rate. All schools have more good applicants than they can accept, and Wayne State seems to be attracting better students each year. As for faculty, we are doing very well in most areas. Until the Clinics structure is completed we can't hire all we need because of the space needs, but we have added some really excellent people in both basic and clinical science departments. We are fortunate to be in a growth phase and many faculty are enticed here because of the potential for growth and creativity in the medical school and the Detroit Medical Center.

O.G.: That's all fine but I don't think the problem is just numbers of doctors. Too many are going into research or subspecialty medicine and too few are taking care of ordinary patients. The curriculum and the faculty have been out of touch with what is really needed. How about that?

A.: Well, you're at least partly right. We do need more general doctors and our curriculum has been changed to include more general medical care. We have established a Department of Family Medicine as well as a Family Practice Residency Program. We are also planning for a large primary care program in the new Clinics organizatin. We hope that a larger percentage of our graduates will select family medicine as their specialty.

But, on the other hand, we still believe in the value of rigorous courses in the basic and clinical sciences for all students, and to do this we need faculty who are active in research as well as in teaching and patient care. A Doctor of Medicine should know, or at least suspect, more than he "needs to know" to treat his patients.

O.G.: Now how about clinical training? You can't do all of your teaching in the clinical years at Receiving Hospital with such a large class.

A.: Right. To begin with, we are part of the Detroit Medical Center which consists of WSU and six hospitals: Detroit General, Children's, Hutzel, Rehabilitation Institute, Harper and Grace. Harper and Grace recently merged, and DGH is building a new hospital in the Medical Center. Each hospital will have its set of specialty areas so costs of equipment, personnel, etc. will be as low as possible, and the care of patients and the educational programs will be the best possible. The new DGH, for example, will be the emergency hospital and not admit elective surgery and medicine patients. Each of these hospitals will provide opportunities for teaching medical students and house staff. There will be about 2,300 beds in all.

O.G.: Whatever happened to the idea that WSU would build a University hospital? I thought it would be necessary for the school to have its own hospital.

A.: That certainly was a possibility some years ago. Now we are operating under the assumption that the hospitals of the medical center and the medical school will find it mutually advantageous to work together in teaching, research and patient care. Having our students and faculty working alongside of private practitioners has advantages as well as disadvantages.

O.G.: I'll bet. Give me some examples.

A.: It makes the student more aware of the kinds of problems the patients have and the concerns of their physicians in a setting similar to that in which they will eventually be working — that is, in most cases, a community hospital. The faculty are also more attentive to their patients' total needs in a "private practice setting."

O.G.: Now the disadvantages.

A.: Right. There are two major disadvantages as well as a number of smaller ones. First, we must grind decisions through a very large number of administrative mills, which is costly in time compared with a University hospital system. Secondly, we have not yet reached the better world to come in which the University lamb and the private practice lion lie down together. Although we have made very significant progress, there is still the tendency for town/gown disputes over some real and some imagined problems.

O.G.: So it was in the beginning and ever shall be. Now, granting that the private hospitals in the DMC are helping Wayne, can you do all of the clinical teaching in these hospitals?

A.: No, we can't. There simply aren't enough beds to do all of our teaching without having patients seen by too many students. And even if there were, there are advantages to having our students learn in other kinds of hospitals and clinics. The Detroit Medical Center hospitals, although not "university hospitals," certainly are more oriented toward teaching, research and subspecialty expertise than most hospitals. So I think it's fine that our students in second year physical diagnosis and in fourth year electives get to work in other good community hospitals.

O.G.: What about the third year?

A.: We concentrate the third year students in the Medical Center because we believe that during this particulary formative period, the student should be guided pretty carefully by our full time faculty in the clinical departments, most of whom work in the medical center.

O.G.: How are the students doing? We always learned a lot at Receiving, but I don't know about the private hospitals.

A.: Well, there are some complaints about patients who aren't "really sick," and some voluntary faculty who won't let them do as much as they'd like with their private patients, but on balance they are doing very well. The reports on them from their internship hospitals are excellent. By the way, a high percentage (68%) stay in Michigan for their post graduate training.

O.G.: Do you flunk out many or do you let them all pass?

A.: The number we lose from each class for purely academic reasons is extremely small — maybe an average of four or five. There are others who leave for various other reasons such as health or family problems. All in all our loss rate is about 1.5%. We don't flunk a certain arbitrary percent each year or anything like that. We try to graduate a full class, bu we also want to be sure that each graduate is really capable of going on into a medical career.

O.G.: You're waffling. Dammit, answer the question: are standards for getting through medical school higher or lower than when I went through? It was really tough then with plenty of very strict shape-up or ship-out professors.

A.: Well, we don't flunk as many as was done in the past, so maybe you could say our standards are lower. But the students are brighter than those in your class were, they are better prepared and with our new examinations and teaching methods, they are better educated, advised and evaluated. I think they graduate having learned more than they did in your day, so perhaps we should say standards are higher.

O.G.: Mmmmm. Well, let's go on to something else. How about the residency programs? Where do they fit in the medical center concept?

A.: Right now we have 425 residents in 18 different programs. These are all under what is called the WSU/DMC Affiliated Intern-Resident Physician Program and are operated by the Medical School in the various hospitals. The young intern or resident receives training in as many as four hospitals. This of course means that the program director must have a group of chiefs from the other hospitals to work with in setting up schedules, rotations and education objectives.

O.G.: How do the residents feel about working with the private patients in these hospitals? At Receiving Hospital we learned a lot because we had a great deal of responsibility.

A.: There's no doubt that the residents still enjoy having lots of responsibility for "staff" patients and to one degree or another prefer a "staff" service to a "private" service. I think it's true that residents frequently had too much responsibility for staff patients, and it's equally clear that residents frequently have too little responsibility for private patients. For a whole variety of reasons we are committed to doing away with the distinction between staff and private cases. Solving the problem of the residents' relationship to these patients will be one of the tougher challanges.

O.G.: Oh well, everything seems to be changing in residency programs – decreases in numbers of some programs, expansion of primary care programs, unionization of house staff, federal limits on FMG's in residency programs and talk of federal limits on numbers of residents in specialty programs. What is WSU planning for these areas?

A.: All I can say for sure is that we are heading in the direction of providing more family medicine/primary care opportunities and that we will also be strengthening our traditional residency programs. Beyond that all we can do is try to stay loose enough so that we can resist or adapt to changes as they come down the road.

The massive $117 million Wayne State University Clinics-Detroit General Hospital construction project is located between the Gordon H. Scott Hall of Basic Medical Sciences, right, and Children's Hospital of Michigan, not shown. Other buildings across the top of the picture, from left to right, are the Webber Building, with three additional floors under construction; Grace Hospital; the Grace parking structure; and Shiffman Library.

O.G.: I'm getting some venous stasis sitting here talking so long. (We leave and look at hole in ground between Scott Hall and Children's Hospital of Michigan. See photograph).

O.G.: What's that?

A.: That's where the University Clinics and the new Detroit General Hospital are being built.

O.G.: Just what purpose will the Clinics building serve?

A.: It has several purposes. As an educational institution as well as a Clinic, it will be an academic home base for many of our faculty, it will provide opportunities for better ambulatory patient care and teaching, it will be the major outpatient facility for all of the DMC hospitals. It will also be a place where we can test various ways of providing the best care at the least cost which is acceptable both to the patients and the health professionals.

O.G.: Will the faculty see their private patients there?

A.: All patients will be private in the sense that they will be seen by a specific doctor rather than by a clinic, but all physicians in the University Clinics must have faculty status, (either full time or voluntary), and their patients will be included in the teaching programs of the Clinics. In that sense there will be no "private offices" in the Clinics. The faculty will eventually consolidate all their patient care activities in the DMC when the new facilities are available.

O.G.: How will all of this be paid for?

A.: The state will pay for the costs which are educational in nature. The patient service costs will have to be covered by patient fees, third party payers, government programs and so forth. Defining these costs and finding sources of payment for them will be a real headache.

O.G.: It sounds to me like the University is going to be opening up a medical practice. Is that right?

A.: Clinical faculty have always had to be good practitioners of medicine in order to teach it well. We will be transferring some of that practice from the hospital outpatient departments to the Clinics and some from private offices around the city. This does not represent a new expansion of the University's role in medical care. It is simply a recombination in a new facility. We think this will be helpful to our University programs, simultaneously benefitting the DMC hospitals, the local community and the wider area of health in which we have a role. Now, would you like to talk about PSRO's, malpractice insurance, HMO's or certificate of need?

O.G.: No. I'm getting a headache and I think we should stop here. I don't agree with everything you are doing but will say that at least I see some rhyme and reason to it. I would like to help. Would you like me to pay my alumni dues, give a check to the Student Loan Fund, give an endowed chair or buy you a beer?

A.: All of the above. Thank you very much.

The special articles in this issue which spotlight Wayne State University's School of Medicine are the second in a series on Michigan's three medical schools. The April issue of Michigan Medicine *spotlighted the University of Michigan Medical School. Plans are underway now for a special article in a forthcoming issue on Michigan State University's College of Human Medicine.*

Major Urban Setting the Backdrop For WSU Med School's Growth, Development

Wayne State University School of Medicine, the third largest medical school in the United States in terms of freshman enrollment, gears its educational service and research activities to the rapidly changing and challenging pressures of a major urban setting. Two hundred fifty six physicians ultimately can be educated in each class, helping meet the needs of the people of Michigan.

The university has faced, as has the entire community, enormously complicated social and economic forces such as the increase in size and mobility of population, the urbanization of society and the public concern for health care, factors having an extraordinary effect on the practice of medicine. Advances in medical knowledge must be encouraged, while at the same time, on a more practical level, the best of health care must be delivered to the public in an effective array of therapeutic, preventive and maintenance systems.

History

The School of Medicine of Wayne State University began operating and granting degrees as a college of medicine in 1868. It was then known as the Detroit Medical College. Another college, the Michigan College of Medicine, opened in 1879 in Detroit, and a little later the two colleges united to become the Detroit College of Medicine and Surgery.

In 1919 the surviving Detroit College of Medicine and Surgery, as it was known then, became an official part of the Detroit Board of Education and thus an important unit of the rapidly-developing Colleges of the City of Detroit. In 1933 the Colleges of the City of Detroit became Wayne University. As the school of medicine entered its second century it experienced growth and creation of a totally new $56 million campus in the Detroit Medical Center.

Student Composition

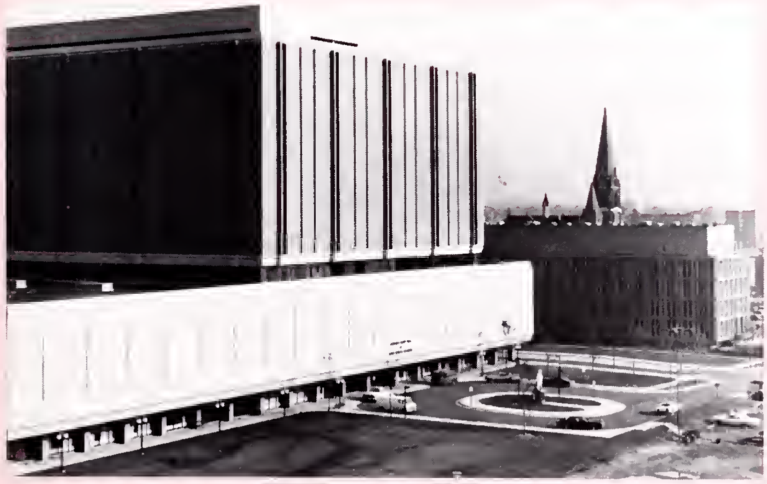
The WSU School of Medicine will produce 240 new physicians with its class of 1976, and if past patterns continue, a significant majority of them will remain in Michigan. In 1977 the maximum capacity of 256 medical students will be graduated, a significant step toward alleviating the state's pressing need for medical professionals. This year, the WSU-DMC Affiliated Intern-Resident Physician Program includes some 425 physicians training in the various medical specialties.

Approximately 94 percent of the 240 students admitted to the WSU School of Medicine in the Fall of 1974 were Michigan residents, although many of the 4,295 applications were from non-residents. Further indication of the emphasis on in-state service is the fact that 60 to 70 percent of each year's medical graduates remain in Michigan.

The school encourages qualified minority students to apply, and special programs are offered to guide, inform, and isolate possible financial concerns.

Graduate Study

The WSU School of Medicine also offers a number of graduate programs both for physicians and for basic scientists who wish to undertake advanced study. Approximately 300 students are enrolled at the graduate level. Programs leading to the master of science degree are offered in anat-



The nine-story Gordon H. Scott Hall of Basic Medical Science, dedicated in 1972, serves as the primary educational facility for the Wayne State University School of Medicine. The smaller structure at right is the Medical Research Building.

omy, biochemistry, immunology and microbiology, pathology, pharmacology, physiology, and psychiatry. Programs leading to the doctor of philosophy degree, as well as combined MD-PhD programs, are offered in anatomy, biochemistry, immunology and microbiology, pharmacology, and physiology.

Medical Research Building

The Medical Research Building, a $4 million structure housing numerous laboratories, was dedicated in 1965. It contains the Theodore and Mina Bargman Laboratory of Cell and Molecular Research, a unit which operates one scanning electron microscope and five transmission microscopes, conducting sophisticated research studies directed at learning more about various forms of human disease.

Basic Sciences Facility

The Gordon H. Scott Hall of Basic Medical Sciences, the primary education facility at the Medical School, is one of the largest structures in the Medical Center. The teaching and research facility houses all of the basic medical sciences as well as the School of Medicine's administrative and service facilities. The $24 million cost of the building was shared by the State of Michigan and the federal government.

Faculty

The WSU Medical School's teaching and research staff is comprised of 416 salaried faculty members, 909 voluntary faculty members, and 141 individuals who are considered regular faculty by the school of medicine, but whose salaries are paid by their respective hospitals. More than 1,200 employees, including faculty, are on the medical school payroll.

Shiffman Library

Shiffman Medical Library, completed in 1970, houses more than 116,000 volumes and serves practicing area physicians as well as faculty, students, interns and residents. The $2.2 million structure provides study space for 800 persons. In addition, it houses the central office of the Kentucky-Ohio-Michigan Regional Medical Library, an organization composed of the 10 medical and dental schools of the three-state region. MEDLINE, a computer search system linked to the National Library of Medicine in Washington, D.C., supplements Shiffman's 116,000 volumes and 3,000 scientific journals.

Detroit Medical Center

The School of Medicine is deeply involved in the 2,500-bed Detroit Medical Center complex, which includes the major teaching hospitals of Wayne State University School of Medicine. The institutional members of the DMC along with Wayne State University are Detroit General Hospital, Children's Hospital of Michigan, Hutzel Hospital, the Rehabilitation Institute, and Harper and Grace Hospitals, now known as United Hospitals of Detroit. Collectively, these units constitute the bulk of the WSU Medical School's clinical teaching facilities.

Harper Hospital, a long-time partner with the Medical School in medical education and service, received a federal grant of $14.8 million toward the construction of a new 354-bed addition to be known as the Webber Memorial Building, which was dedicated in 1974. The building also includes a new home for the WSU Kresge Eye Institute. Older portions of Harper are being remodeled and three additional floors are being constructed on the new Webber Building as a result of a merger of Grace and Harper Hospitals to form United Hospitals of Detroit. When all projects are completed, United Hospitals of Detroit wil have 999 beds in the Detroit Medical Center all available for clinical instruction by faculty members of the School of Medicine, and another 432 beds at the northwest unit of Grace Hospital.

Another major clinical facility on the WSU Medical Campus is the $4.5 million C.S. Mott Center for Human Growth and Development. Under the direction of the Department of Gynecology and Obstetrics, the Mott Center is dedicated to the development and application of more effective controls of population density and the quality of human existence. It also houses a birth defects center to provide for special counseling and birth control research.

University Clinics

Designed to handle more than one-half million visits annually, the University Clinics will train physicians in an outpatient or ambulatory care setting. The nine-level University Clinics, now under construction and scheduled for completion in the fall of 1978, will be the central outpatient facility for Detroit Medical Center institutions. It will serve the dual purposes of educating medical students, with emphasis on family physicians, as well as students in nursing, pharmacy and social work, and providing comprehensive health services, including family and specialty care, to Michigan residents. A new Detroit General Hospital is being constructed alongside the Clinics, with a number of services to be shared.

In addition to the University Clinics, new teaching facilities either completed or under construction in the DMC include Children's Hospital of Michigan, Harper-Webber, a new Detroit General Hospital, and replacement of the present Grace Hospital. While providing clinical training for medical students and allied health professionals, the Medical Center provides the major clinical resources for the postgraduate training of more than 500 physicians in internships and in 18 approved residencies.

The WSU medical faculty are involved in numerous clinical programs which directly benefit the community. Dr. Joan Stryker and Dr. James Wardell operate a clinic at Hutzel Hospital for addicted pregnant women, where more than 870 drug-addicted women have delivered under special treatment during the past three years. The clinic has achieved considerable success in reducing the percentage of babies born addicted. At Lafayette Clinic, a polydrug unit under the direction of Dr. Kenneth G. Schooff, MD, is treating people who experience problems with the use of analgesics (pain killers) and psychotropics (tranquilizers). Kresge Eye Institute offers both research and service in ophthalmology. At Darling Center in Grace Hospital, WSU faculty under the direction of Vainutis K. Vaitkevicius, MD, treat cancer patients, utilizing primarily the chemotherapeutic mode of treatment. A recently developed hypertension clinic at Hutzel, directed by Charles Lucas, MD, specializes in service and research in high blood pressure. A genetic screening program, headquartered in the birth defects center of the Mott Center, attempts to predict for parents the likelihood of their child being born with Mongolism or other birth defects through prenatal diagnosis or geneology.

Other Affiliated Hospitals

A number of institutions in the greater Detroit metropolitan area have affiliated with the Medical School providing a variety of clinical settings for WSU's students. Sinai Hospital provides instructional facilities in medicine, psychiatry, obstetrics and gynecology, and various senior electives. The Allen Park VA Hospital is used extensively for undergraduate and graduate teaching, emphasizing general medicine and surgical care. Lafayette Clinic provides model graduate and undergraduate teaching in psychiatry.

WSU's C.S. Mott Center for Human Growth and Development, dedicated in June, 1973, houses a Birth Defects Center which provides special counseling and birth control research. The Mott Center is a component of WSU's Department of Gynecology and Obstetrics.

A number of other hospitals accept WSU's undergraduate medical students for clinical training, including the following: William Beaumont, The Grace Hospital, Northwest branch; Mt. Carmel Mercy; Oakwood; Providence; St. John, and St. Joseph Mercy of Pontiac.

Ancillary Health Professions

Wayne State University also trains numerous ancillary health professionals through the College of Pharmacy and Allied Health Professions and the College of Nursing.

Just prior to the beginning of construction of Scott Hall in 1968, the *Detroit Medical News* of the Wayne County Medical Society cited an editorial of 1934 emphasizing the need and desirability of developing a Medical Center in Detroit. The *Detroit Medical News* also called attention to the fact that the first substantial step toward that goal took place in 1954 when representatives of participating hospitals and the University met to discuss the Center. The proposals at that time included urban renewal, relocation of the WSU School of Medicine to an area where adequate space was available for expansion, the modernization of existing and construction of new facilities to meet the service and teaching needs of the enlarging School of Medicine, and careful planning to avoid duplication of investments and services by various institutions. These concepts have been scrupulously followed in the interim years of planning for this total community effort.

The effective organizational planning of the past 20 years underscores the cooperation of the hospitals and institutions involved, both public and private. It has permitted the merging of the interests of the medical staffs of the private hospitals and the faculty of the school of medicine in an orderly fashion. The planning has resulted in one of the finest medical centers in the United States, offering education, research, patient care, and service for the nation's fifth largest metropolitan area.

Student Body of Excellence Goal of WSU Admissions

By Jean Pearson
Special to Michigan Medicine

When you are the third largest medical school in the nation, in terms of entering class size, you may appear to be a wide-open target for medical school applicants.

But the illusion of easy entry due to large class size is quietly dispelled at Wayne State University School of Medicine, especially for out-of-state applicants.

This year 3,612 persons applied for admission to WSU medical school which, with 256 slots for the entering class, is third largest in the United States. About 2,000 of the applications were from out-of-state residents, though only 10 to 15 will be accepted. For WSU is committed to serving Michigan residents first, with approximately 90 percent of its freshmen being homestaters.

Last year WSU medical school applications totaled 4,300. The figure would have been the same or higher this year if even more stringent requirements for nonresident applicants hadn't gone into effect for the entering class of 1975.

This year an out-of-stater needed at least a 3.5 grade point average and a score of at least 600 on the Medical College Admission Test (MCAT) just to apply. (State residents are expected to have a 3.0 or better grade point average and a score of 540 or better on the MCAT.)

Specific undergraduate science requirements include general physics, inorganic and organic chemistry and general biology or zoology, including a course in genetics. Some material on embryology in the biology sequence is also "advisable," the admissions information bulletin states.

The undergraduate applying for admission does not have to be a science major (though the majority of those admitted are). However, since so much of medicine is based on science, a nonscience major must do well in the required science courses to assure adequate preparation for the MCAT, favorable consideration by the admissions committee and success in medical courses if admitted.

The committee is actually seeking students who will be adept not only in dealing with the patient's medical problem but with the patient as a whole person.

"The individual who is both bright and well-rounded in terms of personality and interests is likely to develop into a better, more sensitive physician than a scientific whiz kid," says Thomas M. Sullivan, MD, assistant dean for admissions and psychiatry professor. "Our admissions committee looks at the total applicant and his or her interests, not just grade point averages and MCAT scores."

"Emphasis," the admissions information bulletin declares, "is placed on selecting a student body of potential excellence."

That selection process is a year 'round job. The first step is a heavy, but thoroughly considered, pruning of applications to re-

Why Michigan Gains More WSU Grads

Each year Michigan hospitals gain an increasing number of Wayne State University School of Medicine graduates for internship training.

In 1971, only 60 WSU graduates out of a graduating class of 141 chose Michigan for their initial service as physicians.

This year 131 graduates chose internships in Michigan. Of these, 44 went to Detroit Medical Center hospitals, 38 to other Metropolitan Detroit hospitals and 50 to Michigan hospitals outside Metropolitan Detroit.

To what can Michigan attribute its gains?

Marilyn Heins, M.D., associate dean for student affairs at Wayne, first notes that the westward migration of professionals is slowing down. California is becoming crowded with medical professionals and "very competitive," she says.

"I also think," Doctor Heins says, "that Michigan hospitals are improving and doing a much better job of recruiting.

"And I'd like to take five to 10 percent of the credit. If a student says 'I've been in Detroit for four years and I want to get away for a year', I try to think it through: What is it you are trying to escape? Do you have family pressures? Will you feel more independent there? Do you have a real feeling about education?

"I tell the students the thing they must look for first, before geography, is the educational opportunity.

"I really try to point out that the prime reason for seeking an internship — which is part of their training — is to get the best educational opportunity. Geography comes second. Besides, I tell students, 'It's more fun to travel as an affluent doctor than as a poor intern. And if you've got the wanderlust, postpone it for a while'!"

duce the numbers to a manageable size.

A hard look is given every non-resident application to cut the number from 2,000 to 200. It's a tough group to screen, Doctor Sullivan says, and only the cream of the crop survive. Since non-residents are likely to remain in their own state if given an invitation by a medical school there, WSU gives preference to those non-residents who have some roots in Michigan or who seem genuinely interested in receiving their education at Wayne.

Of the 200 who make the first cut, further consideration eliminates all but 30 or 40 applicants who are then invited for interviews. Ten, or 15 at the most, are accepted for admission.

"Last year we ended up with five," Doctor Sullivan reports, "and this year I think it is going to be less than 10."

Weeding through the 1,600 applications from state residents is equally tough, though some considerations can be made for unusual circumstances.

An average grade of "B" and a score of 550 on the MCAT is generally needed to get through the first screening.

"Probably 600 of the 1,600 can be screened out academically," Doctor Sullivan says. Still, every word the applicant writes is looked at to see if there is any reason for an exception.

After the first cut of 600, secondary material such as autobiographies, letters of recommendation and so forth are requested.

"Then of the 1,000, we probably lose 150 somewhere in the application process because they withdraw their applications. Of the remaining 850 applicants, about 600 are selected for interviews. This secondary cut comes after everything in the applicant's folder is read and rated.

A separate zero to 10 rating is given for the applicant's initial screening, academic standing, letters of recommendation and extra-curricular activies. Special characteristics also are noted. (An individual interview rating and overall evaluation is also given later if the applicant is interviewed.)

Each of the 850 also is given a rank order from one to 850. The rank order is reviewed each week, since additional information and interview ratings will change the relative positions of applicants.

Since only 600 will be interviewed, 250 must be screened out on paper. Of the remaining 600, about 25 will be interviewed each week. The interviewer is looking for motivation, personality, expression of ideas, maturity, personal appearance, ability to relate to others and special characteristics.

Each interviewer, who has had years of experience, is a member of the 14-member admissions committee appointed by the dean of the medical school. It is a stable committee with long tenure and little turnover.

"Some people are pretty naive about medicine and our interviewers will really go after them. They know how to bring it out. For example, they might say 'What's the malpractice scene today?' And if the person says 'What's malpractice?, he's not living in the 20th Century."

Soon after the interview the committee as a whole reviews the applicant's file, discusses the applicant for 10 or 15 minutes, gives him a rating of zero to 10, like the Olympic system and then votes "accept," "reject," "hold," or "re-interview."

Those who receive a letter offering admission not only must have an "accept" vote from the committee but also a rating that puts them in the top 256 of the 600 finalists.

"So it's not just enough to be accepted," Doctor Sullivan points out, "And it's not a matter of who is qualified. Of the 3,600 applicants, you could probably say 2,000 are qualified. It's a matter of comparing them all. We feel each applicant is given his or her best shot at admission."

Minority students receive special consideration.

The school is committed to attracting minority students so special programs to guide, inform and isolate possible financial concerns are available.

"Our committee pretty much goes along with the American Association of Medical Colleges' policies and guidelines for minorities," Doctor Sullivan reports. "There are some ethnic groups we have to bend a little bit for on grade point average and MCAT scores, but we follow the same screening process for everyone."

To follow the same process, the committee takes the mean for the nationally accepted minority applications and then grades the WSU minority applicant off that national mean.

"At one time," Doctor Sullivan notes, "it was said that we offered every qualified minority a slot. But we don't do that with our present ranking system. The qualified minorities must also compete.

"We take as many as we can. We have a recruiting officer but it is very difficult to find and to keep qualified minorities."

Wayne takes in about 20 to 25 blacks a year. But even that number is difficult to obtain because Wayne keeps losing qualified ones to strong schools with a lot

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Mrs. Pearson is former medical and science writer for the Detroit News and Detroit Free Press. She is now a full-time masters degree candidate in the University of Michigan School of Public Health and a staff consultant with the Michigan Department of Mental Health. She is past president of the national association of Science Writers.

Dwight M. Schroeder, MD, left, *Detroit*, associate professor of family medicine at the WSU School of Medicine and a family practitioner, reviews Kerry Rifkin's interview with a simulated patient. Rifkin and other sophomore medical students question the "patients" about their symptoms as part of the required doctor-patient relationship course. The simulated patients, amateur actors and actresses, have been assigned specific roles and symptoms.

of money, like Harvard, Doctor Sullivan explains.

"We lost two blacks last week," he says. "That's tough, especially at the end of the year. It's even more difficult to get and to keep the American Indian."

"With women, we've been right up to the national average. For the past several years the number of women applicants has been rising consistently. Five years ago about 10 percent applied at Wayne and nationally and we accepted 10 percent. Now about 20 percent are applying and we've offered places to about 20 percent."

Applications start arriving in July because all Michigan medical schools participate in the "early decision" plan and all applications are now handled nationally (with the exception of a couple of schools).

The average applicant applies to about eight or 10 schools, Doctor Sullivan says. Since there are about 45,000 applicants and 15,000 openings the odds for acceptance are about 1 out of 3.

For early decision, a person must send in an application by mid-August listing only one school. To apply for early decision at Wayne, the student must have a 3.5 grade point average and a 600 MCAT score.

The early decision applicants are considered first. Decisions are made on them in September. By Oct. 1, at the latest, letters of acceptance or rejection are sent to the applicants and Washington is notified. If the applicant is rejected, he is then free to apply to any other school until December.

"We've taken 15 to 20 early decision applicants for the last three years," Doctor Sullivan says. "We'd like to do more early decision handling because it would cut down on applications all around the country."

"But it is hard to do because you don't know what the pool is going to look like. It keeps getting better. If you drop your standards and later in the year you've got people you're not letting in because you've admitted people underneath them on early decision, you are in trouble. So we are conservative and this year are only taking about 20."

The work on early decisions is completed in September. In October the committee usually has business sessions as potential students are busy taking their last shot at the MCAT. By November, the committee is working in earnest again, evaluating applications and reviewing secondary material.

Doctor Sullivan screens all the applications and keeps the process rolling.

"It's really like directing an Army," he observes. "You've got 3,600 men. You have to keep your finger on the pulse of 3,600 people. And you can't make an error. So we check, double check and triple check every little detail — names, numbers, labels, scores and so on."

By November, the committee is also starting the interviews at the rate of 25 or so a week. That goes on until the end of June.

"And then we're not done because in July and August we've got 250 transfer applications for years II and III," Doctor Sullivan adds.

Is there any recourse to a letter of rejection? Dr. Sullivan states: "If a person receives a letter saying 'not accepted' he or she knows it's an open door policy here.

"They can come in and we give them feedback on why they weren't taken by the committee. We at least give them information they can use to improve their application for the next pool.

"You see it's not the end of the world. They can come back next year and there's no cloud over their heads when they do. It's still a matter of comparison with the rest of the pool."

Today's Med Students Rank High Academically, Are More Traditional, Want to Serve

By Jean Pearson

A 107 year-old medical school that is still growing and developing must have strong roots and excellent nurture.

Wayne State University School of Medicine has both.

Its fresh growth may be seen in the cavernous hole south of the Gordon H. Scott Hall of Basic Medical Sciences where a $48 million, nine-story University Clinics and new $69 million Detroit General Hospital are under construction.

It can be seen looking skyward at the three-floor addition to Harper Hospital, a WSU affiliate.

Or it can be seen in the addition of a department of family medicine in a recently revised curriculum or in continued receipt of significant research grants.

But the most refreshing evidence of strength can be found in the student body, both in its character and its size — 1,008 enrolled in the M.D. program.

In what ways are today's medical students different from those of the past? Marilyn Heins, MD, associate dean for student affairs, says:

"They tend to be more conservative and more traditional than the student activists of the '60s.

"Academically they are getting higher and higher Medical College Admission Test (MCAT) and grade point average scores. Sometimes I wonder where it is all going to end.

"In addition to being smarter, I really think they come here interested in serving humanity. They want to work with people; they want to help. This is very real.

"Any bright student who sits before an admissions committee is going to say, 'I want to practice medicine in rural Michigan, or in the ghetto and I want to be a family practitioner.' But even after you subtract that 'halo effect,' I see a sincere interest in humanity, which is very pleasing. Probably the thing that makes my job internally satisfying is to work with these students.

"The students six years ago, I believe, were caught up in student activism and wanted to serve humanity by tearing down society and starting all over again. Some of the students today are angry at the system — as you and I are at times — but they are more willing to work within the system and they are genuinely interested in working with people.

"Some of the sincere idealism with which they enter is diminished in the process of medical education. This probably has something to do with role models. They see successful physicians. They see the person with power. They see the very powerful, prestigious roles that the teaching staff has and I think you emulate what you see. Some of the idealism goes away but I'm amazed at how much of it remains."

Doctor Heins' observations are born out by statistics on the graduating class of 1975. The vast majority are seeking training in internal medicine, pediatrics and family practice (145 of the 207 graduates select just those three categories).

Gregory Tengco, MD, (L) and Reza Abghari, MD, (R), residents in radiology at Detroit General Hospital, receive instruction in the interpretation and diagnostic possibilities of ultrasound photographs. Paul B. Wollschlaeger, MD, professor of radiology at the WSU School of Medicine, directs training in the use of the new ultrasound equipment at Detroit General Hospital. The program is part of the Wayne State University-Detroit Medical Center Affiliated Intern-Resident Physician Program.

Of those selecting internal medicine, Doctor Heins reports, the majority are interested in primary care.

What weaknesses, if any, are found in the current student group?

"Well, for one thing," Doctor Heins says, "I think our students have a high degree of naivete about interpersonal relationships.

"I'm struck also by the fact that some students — especially our freshmen (and they develop more sophistication as they go on) — have been so busy working and getting test grades that even though they are interested in a human services profession and like being with people they are not yet very skilled in interpersonal communication skills. I would really love to have a well-established program for those skills as part of the curriculum.

"I think that no matter how good a doctor you are, and no matter what knowledge you have in your head, if you cannot communicate well with the patient to tell him what you want to do to help himself, it's kind of hollow — your head that is!

"It may work out in a practice setting that a nurse clinician does advise the patient on what he should do — I wouldn't be against it — but I think just to train the doctor to make decisions and not to communicate would be very wrong.

"Finally, about our students today, I would say that they are very aware of the fact doctors have high coronary rates, high suicide rates and lousy family lives. They want to be different. They don't want this pressure and they are thinking it through, attempting to avoid it.

"This isn't laziness. This is a realistic appraisal. Ninety-five percent want group practice. And even those who are independent say 'I might try solo because I'm an independent S.O.B., but I think I'm going with a group.' "

Recognition of the need for more primary care physicians led the WSU School of Medicine to establish a department of family medicine in 1973 headed, since July, 1974, by Joseph W. Hess, MD.

First, second and third year medical students receive beginning experiences in the concept of family medicine as part of their regular curriculum. The curriculum includes experiences in family practice and with primary care physicians. Approximately 300 primary care physicians throughout Michigan are serving as preceptors through a cooperative program operated by Michigan's three medical schools.

Four physicians will undertake family practice residencies this year, receiving ambulatory care experience at WSU's Family Health Service, located at McLaughlin Hall, the former nursing residence at Harper Hospital. The residents will receive additional family practice experience at Detroit Medical Center hospitals, with Grace Hospital serving as the primary training site.

The Family Health Service is the University's model service unit. Plans call for the service to be housed in the University Clinics when its new building is completed.

The family medicine unit at WSU, which had divisional status prior to 1974, has been strengthened by the addition of experienced family physicians during the past 18 months. A total of eight physicians now staff the Family Health Services.

This early correlation of clinical experience for students is part of the recently revised undergraduate program in medicine which consists of a core curriculum in cell biology, normal and abnormal organ system development, structure and function.

The clinical correlation relates basic sciences to patient care. The social and behavioral sciences in the first and second years are related to individual and community health problems with particular emphasis on preventive medicine and family care.

Students work one-half day each week with families to gain an understanding of the interrelationship of social, economic and physical factors in health and illness.

Advanced basic sciences and medical sciences are covered the first two years. During the second year the program in clinical medicine is used as a bridge between the basic sciences and the clinical years. It provides an intensive course in interviewing techniques, medical histories and physical examinations. The individual attention given the student is made possible by the extensive use of a large clinical faculty and an abundance of inpatients in the affiliated hospitals, which now number 19.

The third year is devoted to clinical clerkships and the fourth year to electives, of which 12 may be taken away from WSU with prior approval.

All full-time faculty in clinical departments serve in one or more of the affiliated hospitals. Several of the WSU medical school department heads are also chiefs of departments in the Detroit Medical Center.

Internationally known for his research on infectious diseases, A. Martin Lerner, MD, also is chief of Hutzel Hospital's department of medicine.

In a recent annual report, Doctor Lerner noted:

"Our goals remain the same: (1) to continue excellence in teaching and service to the sickest patients from the greater metropolitan Detroit area in every subspecialty of medicine and (2) to increase the excellence of meaningful clinically relevant research as a nationally important academic institution."

(Continued on page 450)

Letters

The National Health Planning Act

To the editor,

Regarding the article on "The National Health Planning and Resources Development Act, PL 93-641" which appeared in "Michigan Medicine," June 1975, page 343.

I am a new physician in the state having recently moved here from Southern California. Would you please advise me as to where I may obtain a copy of the Act PL 93-641.

The article states that practicing physicians must "make their voices known." But it does not state to whom or how this should be done. I would appreciate the advice of Michigan State Medical Society as to the appropriate channels through which a practicing physician can develop some input into this new act and its implementation.

Hoping you will forward this letter to the appropriate individuals.

Yours very truly,
John M. Clark, M.D.
Radiologist
Schoolcraft Memorial Hospital
Manistique

Editor's Note: Although the regulations establishing standards and criteria for health systems agencies (HSAs) have yet to be issued by HEW, existing Comprehensive Health Planning (CHP) agencies are actively engaged in activities which will enhance their designation as HSAs. An appropriate level of involvement, for interested physicians at this time, suggests Robert E. Rice, MD, chairman, MSMS Committee on Federal Legislation, would be to contact the local CHP agency and participate in planning activities. Copies of the law or summaries are available from MSMS in addition to the names of CHP agency personnel.

More On SIDS

To the editor,

Dr. Ahronheim's letter regarding SIDS (April *Michigan Medicine*) was appreciated by this reader, but a few clarifications may be offered. The following is an extract from the *Bulletin, International Academy of Pathology,* No. 1, Vol. 16, 1975.

"The Sudden Infant Death Syndrome — 1975, An Up-Date for Pathologists" (Marie Valdes-Dapena, M.D., St. Christopher's Hospital for Children, Philadelphia, Pa.)
Dr. Valdes states:

> "By the mid-60's a number of epidemiologic features of the typical crib death were already established. Males were known to be more susceptible than females and blacks more vulnerable than whites. The peak incidence was between two and four months of age. The deaths were more apt to occur in winter than in summer and happened predominantly between 12 midnight and 9 in the morning.
>
> "The fact that there is a greater incidence of the Sudden Infant Death Syndrome among the socially and economically deprived was established in the late 60's. More recent, larger and more detailed analyses, however, have shown a veritable scale of vulnerabilty for infants in the southwestern part of this country from the least susceptible, Oriental (rate 0.51 per 1,000 livebirths), through Whites (1.32), Mexican-Americans (1.74), and Blacks (2.92) to the most vulnerable, American Indians (5.93 per 1,000 livebirths).

(This is in contradiction to Dr. Ahronheim's statement: "There is no relationship to the family's socio-economic status.")

"Twins are more susceptible than singleton births (3.87:-1.46 per 1,000 livebirths) and triplets are at greatest risk, (8.33). Low birth weight seems to be related.

"As regards the mother of the affected infant, she is apt to be less than 20 years of age, to have had little prenatal care. Apparently infants born to mothers maintained on methadone for opium addiction are at special risk in this regard.

"In 1973 Greenberg et al., (1973) published the results of their study of environmental factors, specifically SO_2 concentration in the air. They showed no association between levels of that pollutant and the occurrence of crib deaths over a four-year period in Chicago.

"One of the most interesting of recent developments in the realm of epidemiology is the fact that the incidence of crib deaths is actually diminishing. In the City of Philadelphia, the rate per 1,000 livebirths among white infants dropped steadily from 1.22 in 1960 to 0.61 in 1972. Among blacks during the same period of time it diminished from 4.41 to 3.64.

"A parallel decrease has also been observed in the last dec-

Research is not emphasized in undergraduate medical students' training programs, but at Wayne they can find it underway in almost every specialty, subspecialty and basic medical science.

Arnold M. Weissler, MD, chairman of the Wayne State University Department of Medicine and chief of medicine at Harper Hospital, says: "One of the most effective means of developing a critical thinking atmosphere among our students is to involve them in the activities and thinking of the clinical investigator.

"Such an interchange provides not only new knowledge, but, of equal importance, a familiarity with the attitudes, methods and analytic approach of the clinical scientist. This contact with the clinical scientist inculcates a method of thinking and a critique which cannot be introduced through the passive communication of memorized information.

"While there are other means of introducing such critiques into the thinking process, the contact with the effective clinical investigator has an extraordinary impact."

LETTERS/*Continued*

ade in Syracuse and in Seattle."

The article is a veritable gold mine of information on the Sudden Infant Death Syndrome, and its perusal is recommended to anybody concerned with it. Dr. Marie Valdes-Dapena closes with the statement "Increasing interest on the part of the laity, government and the medical community has, in recent years, expanded the body of knowledge concerning the Sudden Infant Death Syndrome. All earnestly hope that as a consequence of amplified research efforts, the mechanism (or mechanisms) of this type of death will be discovered soon." To which I have to add nothing but "Amen."

I was interested in Dr. Ahronheim's statement pertaining to the frequency of middle-ear infection in his cases. I remember him stating "one of every three cases in my own autopsy material." I wonder how frequent these cases are in Jackson County.

Sincerely,
Clemens M. Kopp, M.D.
County Medical Examiner

The Cost Of Malpractice Insurance

To the editor,

It appears to me that the powers-that-be in our medical society are not handling this malpractice crisis in as efficient manner as possible.

Although the public is well aware, but only vaguely, that the cost of malpractice enters into the cost of their medical care, we have been playing footsy insofar as this particular aspect of the problem is concerned. It seems to me that every doctor in the state should raise his office calls one dollar ($1) and place in his office a placard (to be distributed by the Michigan State Medical Society) reading something to the effect "Due to the increased cost of malpractice insurance it has become necessary for me to increase my fees for office calls by $1. Unless the public can convince their legislators to alleviate the problem before my next malpractice premium becomes due on . . . . ., I may have to increase my fees even further. Contact your legislator **today**, BEFORE YOU FORGET!"

The dollar is not the important factor, the plaque is!!!

Human nature being what it is, I think that if the matter were handled in this manner it would bring forcibly to the public's attention the fact that each of them individually, is being charged for the increasing cost of malpractice, and that it is not "just happening to the other fellow." Of course, we can argue, speciously, of public relations; but this era, of course, has passed.

It is my opinion that this method would be even more effective than the recently discussed possibility of a strike, because even if a strike occurred the average individual would think "MY doctor would never let me down," and hence it would not be as impressive as this suggested procedure would.

Yours truly,
Sylvan Broadman, MD
Farmington Hills

Editor's Note: The MSMS Bureau of Economic Information advises that the cost of higher malpractice insurance rates actually is a small proportion of the doctors' total costs. The bureau suggests doctors calculate actual per cent of change in operating costs due to higher malpractice insurance rates and increase office charges by that amount, if they so choose.

Cocktails At the 'Defendant's Bar'

To the editor,

The total May 15, 1975 (Vol. 74 — No. 15) issue was very informative and rewarding. I wondered, as I scratched my head over the "plaintiff's bar" (Page 282), if it might not be more productive if all concerned met for a few cocktails at a "defendant's bar"? I was also surprised at Mr. Kitch's admission that a certain type of witness might be used by plaintiff. Yikes!! No wonder we don't understand each other.

Yours truly,
Max L. Durfee, M.D.

Spina Bifida Occulta and Spina Bifida Cystica and Related Manifestations

(A Review Article)

By Janet L. Buta
Ann Arbor

Spina bifida is used as a collective term to include a wide variety of congenital malformations in which there is a failure of a complete midline fusion of the vertebral arches.[1] It includes conditions which entail the central nervous system. These conditions may range from just slight involvement to a completely paralyzed and incontinent child.[2]

There is a malformation of the neural arch. The sclerotomic cells migrate toward the midline until they meet around the notocord which separates it from the neural tube and the gut. The notocord finally lies in the axial condensation of dense sclerotomic tissue. Spina bifida's primary involvement is the vertebral arches, but the secondary involvement is the neural tissue.[3,4,5]

For clarification, the following terms are defined.

1. Spina bifida occulta: A vertebral defect in which there is no protrusion of meninges or neural tissue.
2. Spina bifida cystica: A vertebral defect of the midline in which there may be involvement of neural tissue. The neural tissue may be visible in a sac or it may lie below the skin.[1]

Spina Bifida Occulta

Virchow coined the phrase "spina bifida occulta" to describe a type of neurological disorder in which the lesion was below the level of the skin.[6] Spina bifida occulta is more common than spina bifida cystica. There may or may not be abnormal neurological signs. And there may or may not be actual structural malformations of the spinal cord or cauda equina.[1]

Spina bifida occulta is usually seen in the fifth lumbar to the first sacral vertebral segments. It may vary from a small failure of fusion, a notch in one spinous process, to a complete absence of bone between widely separated pedicles. Roentgenographic findings indicate skeletal defects, but it is not feasible to ascertain neurological involvement by these means. Roentgenograms taken for other purposes may indicate spina bifida occulta.[1]

Spina bifida occulta may be suspected if one of the following is present:

1. A visible cutaneous or subcutaneous abnormality.
2. An investigation of neurological disorders, especially of the lower extremities or of bladder and bowel dysfunctions.
3. An orthopaedic deformity of the lower extremities.[1]

Cutaneous defects are usually seen in four variations either singly or in combination.

1. Abnormal hair may appear at birth or it may appear postnatally. The hair occurs in the midline or just lateral and is coarse and may be several inches long. However, it may resemble "silky down" in the midline.[1]
2. Angioma, a visible "port-wine" stain of an irregular size in the midline of the lumbosacral region may be associated with an undisclosed spina bifida occulta or cystica.[1]
3. Lipoma, a mass in the midline or just lateral and composed of gritty fat bound together with numerous fibrous septa and usually adherent to the underlying fascia. The size of the mass varies from that of just a mere nodule to "bustle size and shape."[1]
4. Dimple, a midline or just lateral structure is usually difficult to see upon examination unless it appears in the intergluteal cleft or in the form of an underlying spina bifida or may be a continuation of a fistula extending from the spinal canal.[1,2]

Neurological disorders are divided into two groups.

1. The physician may observe a musculoskeletal or sensory disorder of the lower extremities before or when the child makes the initial attempts at walking. Typical symptoms are muscle weakness, deformity of the hips and feet and a gait disturbance.[1,2] Various abnormalities of posture and gait are dependent on the muscle group involved. Each child shows his own particular congenital scoliosis, dislocation of the hips, pelvic asymmetry, positional abnormality of the feet, an absence of deep tendon

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Miss Buta is a graduate student at the University of Michigan and holds a bachelor's degree from the U-M School of Dentistry and a masters in anatomy from the U-M Medical School.

reflexes or a clear cut sensory impairment of the lower extremities.[7] Or,

2. The physician may become aware of a lack of control of the urinary or rectal sphincter. At the time of toilet training, the following significant problems are encountered:
    A. A regression in both bladder and bowel control or a regression of training habits once mastered.
    B. Abdominal or overdistended bladder pressure may result in actual urinary dribbling.
    C. The anal sphincter may be palpated in the act of relaxation.[1] The lack of urinary sphincter control is quite often found during direct cystoscopy. The lack of local pathology and a persistence of urinary sphincter disturbance is a clue given to evaluate the patient for a lumbosacral spina bifida occulta. In most cases, the spina bifida occulta patient's urinary problems may be alleviated by rigorous training or retraining and by the use of diapers. It must be emphasized that the surrounding skin *must* be kept dry as this may cause a secondary maceration of the perineal skin.[1,8]

    Anal sphincter problems may be mild and are taken care of by rigorous bowel management programs.[1]

Spina Bifida Cystica

Three forms of malformation are seen in spina bifida cystica.

1. Meningocele is a defect in the vertebral arches permitting some cystic distention of the meninges, but no evidence of anomalous neural tissue is seen.
2. Myelomeningocele is a congenital defect of the vertebral arches accompanied by cystic distention of the meninges, which may form a sac, and is associated with structural or functional abnormalities of the spinal cord or cauda equina.
3. Myeloschisis is a surface presentation of abnormal neural tissue uncovered by meninges. This is a form of myelomeningocele, but no sac is present.[1]

Spina bifida cystica is more serious than spina bifida occulta as to the abnormalities involved, the degree of these abnormalities and the treatment of same. But treatment may be carried out.

The meningocele and the myelomeningocele are discussed together as the clinical signs — a sac protruding on the individual's dorsal aspect — are so similar. The sac is denoted as a meningocele if it is visible along the spinal axis and is covered with epithelium or a membrane. There is no neural tissue seen in the sac, either with the naked eye or transilluminated light. On neurological examination of the sac and its location, there may or may not be evidence of an abnormality of sensory, motor or reflexes of the lower extremities.[1,2]

If the nerve roots are attached, in any fashion, to the sac, it is classified as a myelomeningocele. There is neurologic deficit caudal to the level of the lesion. On occasion, the neurologic deficit may also be cephalad. In newborns, minor abnormalities of motor, sensory, reflex or sphincter function may be impossible to assess. It is sometimes difficult to determine whether or not neural tissue is involved in these sacs, even using the most up-to-date surgical equipment.

The incidence of the myelomeningocele is almost twice that of the meningocele. Using strict anatomical criteria, the meningocele is a rare lesion.

The clinical signs of spina bifida cystica are severe. The lesions range from the simple, flat, partially epithelized membrane overlying a bony defect, to complete myeloschisis in which most of the spinal cord may be present on the surface. Sometimes, a meningocele sac protrudes above the surface of the skin and thus has a pedunculated lesion with a broad sac on a narrow stalk-like base. More commonly, a so-called sessile type of lesion appears. The sac is often entirely membranous, transparent and thin. The thinness of the sac makes it vulnerable to easy ulceration or rupture by external friction. There may be exposed neural tissue or an ulcerated granulating surface partially epithelized. There is a varying amount of scarring and necrosis or exudate secondary to infection.

One of the most prevalent clinical manifestations of cord dysplasia is a lower motor flaccid paralysis which indicates that the entire cord distal to the level of the lesion is involved. There are no spinal reflex arcs intact caudal to the level of paralysis due to the myelomeningocele. Few exceptions exist.[1]

When the spinal cord is surgically freed from an adherence to the inside of a meningocele sac, the increased bulk of the cord does not fit into the original sized spinal canal. Although the central connection of any or all of the peripheral roots may be impossible to define, a normal appearance of the peripheral root is observed. A normal dorsal root ganglion is visible distal to the lesion. Indications of cystic cavitation of the cord may be seen at the level of or just cephalad to a lumbosacral or lumbar myelomeningocele.[1,2]

The lumbosacral area, site of the posterior neuropore, is the most frequent location for spina bifida cystica lesions. A neural defect may occur here as this is the last region for invagination and separation of neural ectoderm from epithelial ectoderm.[3,9,10]

The effect on extremities is apparent. Flaccid paralysis is severe and is often complete from birth. It is accompanied by a total absence of sensation. The lower extremities display a wide variety of muscular imbalance depending on the involvement of elements composing the cauda equina or spinal cord.[2]

A relaxation of the rectal sphincter may be evident upon postnatal examination. The urinary bladder may show a constant dribbling through the urethera or uro-rectal opening. The use of an ileal-loop diversion is used in some centers and is accepted as a positive measure for alleviating this problem.[11]

Hydrocephalus and the Arnold-Chiari Defect

It is felt that hydrocephalus in spina bifida is a result of secondary defects related to the Arnold-Chiari malformation. Seldom is spina bifida cystica without hydrocephalus.[12] The size of the child's skull should be measured with a steel tape and compared with standard growth charts. Because the *rate of growth* is important, frequent measurements should be taken. Ordinary signs of hydrocephalus are seen and are more severe in patients with a myelomeningocele at the lumbosacral level.[1,2]

The Arnold-Chiari malformation is characterized by the caudal movement of the cerebellar tonsils through the foramen magnum, which forces the medulla oblongata to descend, elongate and pull the fourth ventricle along in a downward course. Obliteration of the cisterna magna is due to fibrous adhesions of the cerebellum to the medulla and the surrounding dura. The amount of kinking of the medulla on the spinal cord is variable, as is cord tethering.[1,2]

A patient with spina bifida occulta may not be affected in any adverse way, while the patient with a mild case of spina bifida cystica may have few problems. However, some spina bifida patients may need the care of several specialities in order to perform at the maximum level for the duration of life.[11]

Controversy about conservative and immediate surgery exists among surgeons. The best time for closure of a myelomeningocele, not completely covered, is within the first 24 hours of life. The physician or physicians must ascertain if the patient is salvageable. If it is deemed so and a definite treatment plan is outlined, then corrective surgery should be performed immediately.[1,11]

Most physicians feel that it is not justifiable or desirable to carry out surgical procedures in early infancy on patients totally paralyzed below the upper lumbar region, because removal of a myelomeningocele sac or the covering of a myeloschisis with skin does not bring about recovery of limbs or sphincters that were totally paralyzed at birth.[1,13]

Throughout the world, most cases of spina bifida occulta and spina bifida cystica are being seen. This may be due to more assistance in the prenatal period or a sophistication of the public where medical treatment is readily sought.[14] *But*, the problem has presented society and the medical profession with a real challenge. How is the long-term care of these crippled, incontinent and recurrently infected children of varying degrees of intellectual ability going to be treated? A uniform plan of medical management is hardly realistic in a situation with so many variables.[1] It must be remembered that spina bifida occulta and cystica are not single disease entities and should not be treated as such.

The incidence is difficult to ascertain as the only cases seen are the ones that come for treatment at various clinics. It is reasonable to state that it is one of the more common anomalies.[15,16,17] One investigation of the problem found that an estimated 0.76 per 1000 stillborns had some involvement of spina bifida.[4,18]

The cause is unknown. Therefore, numerous embryologic descriptions and plausible explanations are being investigated.[7,14,18]

Summary

The morphology of an individual affected with spina bifida is usually seen upon clinical examination. In an effort to understand the dynamics of this malformation, a description of the facets, known to date, of spina bifida occulta and spina bifida cystica are presented. It can be determined that there is an inductive process in the normal development of the central nervous system, but this process is interrupted by some "factor" which causes malformation of the central nervous system. The incidence and involvement of spina bifida is variable. The cause is unknown. It is common to encounter other central nervous system abnormalities combined with spina bifida.

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Cases of Certain Diseases
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For the Four Week Period Ending June 27, 1975

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

	1975 This 4-Week Period	1974 Same 4-Week Period	1975 Total To Above Date	1974 Total Same Date	Total Cases for 1974
Rubella	132	206	1,358	1,091	1,388
Cong. Rubella Syndrome	0	0	1	0	1
Measles	540	259	2,912	1,820	2,365
Whooping Cough	3	8	43	28	104
Diphtheria	0	0	1	0	0
Mumps	842	838	7,770	5,134	7,230
Scarlet Fever & Strep Sore Throat	1,282	2,014	14,310	24,090	31,802
Tetanus	0	0	0	1	6
Poliomyelitis (Paralytic)	0	0	0	0	2
Hepatitis	191	263	1,433	1,937	3,599
Salmonellosis (other than S. typhi)	51	64	398	524	1,001
Typhoid Fever (S. typhi)	1	1	2	3	11
Shigellosis	39	102	377	524	1,436
Aseptic Meningitis	10	7	47	55	162
Encephalitis	12	4	39	28	69
Meningococcic Meningitis	5	1	55	28	54
H. Influenza Meningitis	14	13	68	67	121
Tuberculosis	108	85	585	473*	1,431
Syphilis	117	207	822	1,510	2,659
Gonorrhea	2,414	2,344	15,020*	15,459*	32,152

Information can be supplied by the local health department on the local incidence of disease.

Maurice Reizen, M.D., Director
Michigan Department of Public Health

*Corrected totals.

Use of the Intra-aortic Balloon Pump In Treating Postoperative Low Cardiac Output

By Douglas M. Behrendt, MD
Nancy McWorter, RN
Marvin M. Kirsh, MD
Mark B. Orringer, MD
Herbert Sloan, MD
Ann Arbor

Recent technical advances in open heart surgery and improvements in pre- and postoperative management have reduced the mortality rate for elective operations to very acceptable levels. In well-equipped medical centers, operations such as aortic or mitral valve replacement or coronary artery bypass are accomplished with mortality rates of two to 10 percent, depending upon the preoperative condition of the patients. Unfortunately, there remains a small group of patients whose cardiac output following cardiopulmonary bypass is not sufficient to allow them to survive operation. For many years surgeons have sought a means of mechanically supporting these patients until their myocardial function could recover sufficiently to sustain adequate circulation. Although a number of mechanical systems have been evaluated experimentally, only one, intra-aortic balloon counterpulsation, has proved to be of practical clinical importance.

The principle of counterpulsation, first proposed by Clauss et al.[1], is that aortic systolic pressure is reduced during ventricular contraction while aortic diastolic pressure is increased during ventricular relaxation. Because aortic systolic pressure (afterload) is reduced, myocardial work is decreased and oxygen demands are lessened. The increase in aortic diastolic pressure may promote perfusion of the coronary arteries and peripheral tissues. Counterpulsation was initially accomplished by withdrawing and returning blood from the femoral arteries with a pulsatile pump phased with the electrocardiogram. A similar effect can be achieved by intermittent external compression of the body. Moulopoulos[2] produced the same pressure phenomena with an intra-aortic balloon which was expanded during diastole and collapsed during systole. Clinical balloon assist units were then developed by Kantrowitz et al.[3], Buckley et al.[4], Gott et al.[5], and Bregman et al.[6] The system developed at the Massachusetts General Hospital in conjunction with the Avco Laboratories, has received the most widespread clinical application. With this technique, a small but rewarding number of patients with cardiogenic shock from acute myocardial infarction have been supported through angiography and successful open heart surgery.[7] Similarly, a small number of patients in cardiogenic shock following open heart surgery have received circulatory support until their depressed myocardial function has had a chance to improve.[8]

This report presents our experience at the University of Michigan Medical Center with the MGH-Avco balloon pump counterpulsation system in 15 patients who were unable to sustain an adequate cardiac output at the end of their open heart operations.

Clinical Material

During the past two years, 15 patients aged 30-68 years, who underwent open heart operations at the University of Michigan Medical Center, required intra-aortic balloon counterpulsation in the immediate postoperative period. In 13 patients cardiopulmonary bypass could not be discontinued following their intracardiac repairs. Attempts to rest the heart by maintaining circulation with cardiopulmonary bypass for periods up to 30 minutes were unsuccessful, as were the standard inotropic agents, isoproterenol, norepinephrine and calcium. Because these measures were inadequate the intra-aortic balloon was inserted and counterpulsation was initiated in the operating room before bypass was finally discontinued. Refractory low cardiac output occurred in the other 2 patients after they had returned to the intensive care unit, and balloon assistance was instituted there. Our policy, of maintaining an emergency cart containing the necessary sterile instruments for balloon insertion and removal, prevents unnecessary delays in such urgent situations.

Insertion of the intra-aortic balloon is not difficult. Employing local anesthesia if necessary, one isolates the common femoral artery and sutures a 3/8" woven Teflon graft end-to-side to it. The balloon is passed retrograde through this graft until it strikes the aortic arch. The graft is secured to the shaft of the balloon with multiple heavy ligatures. Before the femoral incision is closed, a portable chest roentgenogram is taken to verify that the balloon is correctly positioned in the descending aorta with the tip just distal to the left subclavian artery. The subcutaneous tissues and skin are then sutured securely over the shaft of the

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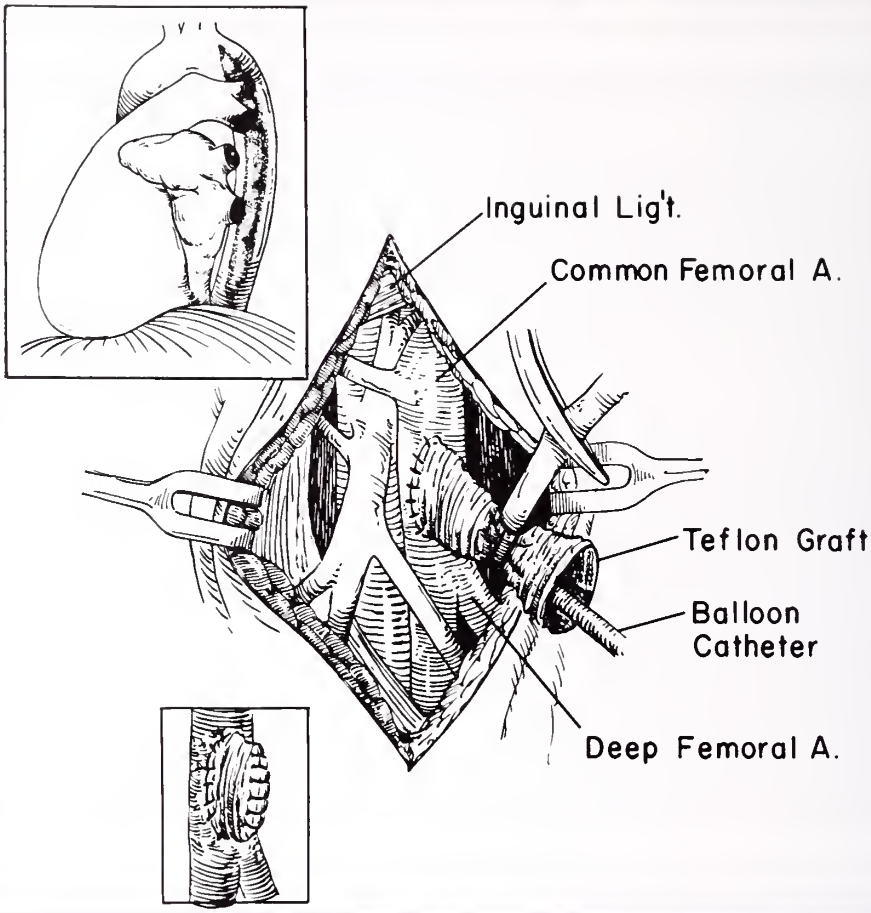

Figure 1. The technique for insertion of the intra-aortic balloon pump through a Teflon graft sewn end-to-side to the common femoral artery. The balloon is positioned for pumping in the descending thoracic aorta (upper inset). Following removal of the balloon, the excess graft is excised. The remainder serves as a patch angioplasty to close the femoral artery.

balloon and the segment of Teflon graft. The point of exit from the skin is treated with antibiotic ointment, and the shaft of the balloon is securely sutured to the patient's thigh.

Once the balloon's position has been verified, pumping is begun. Proper phasing with the patient's electrocardiogram is absolutely essential, since if the balloon were to inflate during systole, left ventricular work would be increased. The commercially available equipment allows one to coordinate balloon inflation and deflation precisely with the patient's electrocardiogram. The timing circuits adjust balloon inflation to match changing R-R intervals and can follow rapid and even irregular heart rates.

Weaning from counterpulsation is initiated after the following criteria of improvement in clinical status are evident:

1. The need for catecholamine support is reduced to low levels (e.g., less than one mcg/min of isoproterenol)
2. The patient is alert, peripherally well perfused, and free of arrhythmias; and,
3. The patient's left atrial pressure or pulmonary capillary wedge pressure has fallen to less than 20 mm. Hg.

There are two alternative methods for weaning the patient from the balloon. The frequency of balloon inflations may be sequentially tapered over a 24-hour period from every second, to every fourth, and finally to every eighth beat or the balloon inflation volume may be progressively decreased. During the weaning process the patient is continually monitored to detect any deterioration in his condition. If the hemodynamic measurements remain stable, the balloon may be removed. Before doing so, we employ the additional safeguard of leaving it in place and letting it flutter by inflating it with 10 cc. volume, for 12 more hours to be absolutely certain that no deterioration will occur without balloon assistance. At this volume of inflation, there is little hemodynamic effect, but the continuous movement prevents

Figure 2

Patients Treated With IABP Following Cardiac Surgery

15 PATIENTS				
Single valve repl. 6	Multiple valve repl. 2	Valve repl. + CAB 4	CAB 2	Other 1
Survived 3	Survived 1	Survived 2	Survived 2	Survived 0

thrombus formation on the balloon. As an additional means of preventing thrombosis these patients have received 500 ml. Reomacrodex per day which reduces platelet adhesiveness. We do not use heparin in the early postoperative period, although we do give it to patients on the balloon pump who have not had operations. When balloon assistance is no longer required, the femoral incision is reopened and the balloon is withdrawn by cutting the ties holding it inside the Teflon graft. As initially recommended by Kantrowitz,[9] the excess graft is then trimmed and oversewn, leaving it as a patch angioplasty on the femoral artery. The passage of Fogarty catheters distally at the time of balloon removal allows extraction of any thrombus which may have formed in the artery beyond the site of insertion of the Teflon graft.

Results *(Fig. 2)*

Eight of our 15 patients survived. They were eventually weaned from catecholamine support and the respirator and were discharged from the hospital. Most required counterpulsation for less than three days. No patient had clinically significant ischemia of the leg used for insertion of the balloon pump, although one patient did lose his peripheral arterial pulses. None of the balloons had thrombus on them at the time of removal, nor were there any clinically recognized episodes of embolism, abnormal coagulation, or destruction of red cells or platelets during balloon pulsation.

Discussion

Our experience demonstrates that intra-aortic balloon pumping is an easily applied, safe means of supporting circulation in the patient whose myocardial function has been temporarily depressed by open heart surgery. It has failed in those patients for whom it was employed as a last resort in the operating room, but has been successful in all patients who left the operating room alive. It is clear that counterpulsation cannot provide the same degree of circulatory support as total cardiopulmonary bypass. Counterpulsation requires rhythmic contraction of the patient's heart since balloon phasing is based on the electrocardiogram, and it also requires a minimal level of intrinsic cardiac output. Although it can be utilized for several weeks at a time without difficulty, success ultimately depends upon recovery of the patient's weakened myocardium. Within these limitations, intra-aortic balloon pumping has resulted in the salvage of eight of our patients who otherwise almost certainly would have succumbed following their cardiac operations. It has proved simple and safe to use, requiring a minimum of technical support.

Intra-aortic balloon pumping is also potentially useful for patients in cardiogenic shock associated with myocardial infarction or sepsis, and it may be of help in patients with fresh myocardial infarction or preinfarction angina because it might reduce the extent of ischemia.

Summary

Counterpulsation by means of intra-aortic balloon pumping has been used to support circulation in 15 patients with low cardiac output following open heart operations at the University of Michigan. Death appeared imminent in all of these patients following failure of conventional means of support, yet eight ultimately survived and were discharged from the hospital. The technique has proved to be simple and efficient without creating significant complications. It is recommended as an additional means of further reducing the low mortality rate following open heart surgery.

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Fifty-six pre-sophomore medical students from Michigan schools are ending their summer experiences with the MSMS-sponsored AMSA-MECO (American Medical Student Association Medical Education Community Orientation) program.

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The students this year have been based with 30 hospitals throughout the state. Each hospital pays approximately $80 per week to the student, as well as providing room and board.

The program is reduced in size this year from 1973, when the greatest number of students (102) and hospitals (53) took part.

Reasons for the decline include economic strains on the hospitals, which prevent them from supporting so many students; the growth of the federally-funded Primary Care Preceptorship Program, which places no financial burden on hospitals and has the participation also of all three medical schools in Michigan, and the students' own restriction of the SAMA-MECO program to pre-sophomore students. Many hospitals prefer students with more years of training.

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Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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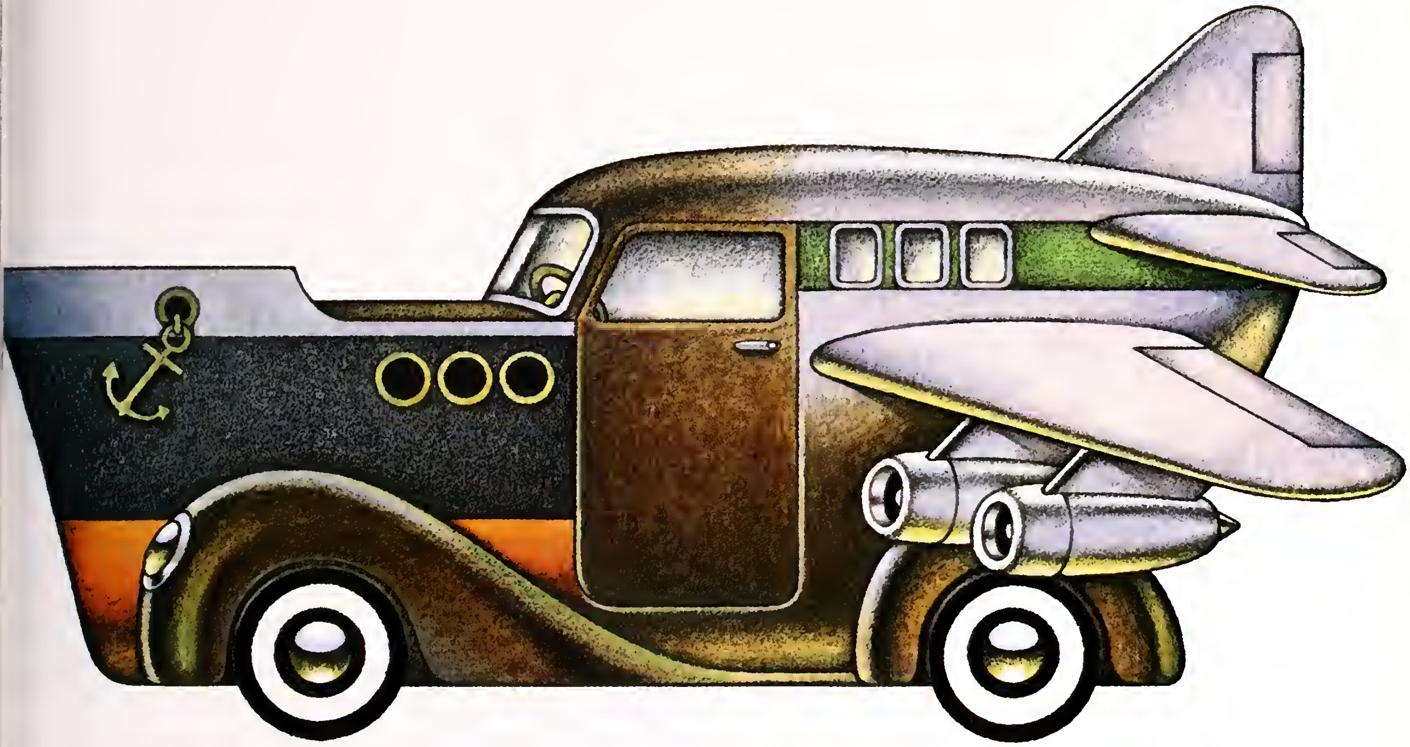

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Food and Drug
Administration

The idea of a so-called patient package insert has been around fo a long time. Many physicians alread use written instruction sheets to provide patients with information about the drugs they are taking. An some physicians give verbal instructions; but in too many instances these are what I call eye-glazing exercises. I have seen patients sit wit glazed eyes listening to a rapid-fire lecture by a hurried physician who has 20 people out in his waiting room. These patients aren't given sufficient understanding and therefore do not follow instructions. So I think the idea of an official package insert for patients is a good one. Perhaps we should really think of this kind of information simply as a extension of drug labeling.

The benefits of patient involvement

Many physicians may not realize how frequently a patient obtain his drug information from Aunt Tillie or the next door neighbor. An this information is almost always bad or irrelevant to the case at han Furthermore, the incentive to go along with a prescribed program is slim if the only reading matter the patient receives, along with his prescription, is a bill.

As an educator I am impresse by the principle that the best way t get someone to do something is to involve him in the process. So the

Dr. James H. Sammons
Executive Vice President
of the American
Medical Association

I think there are advantages a well as some real disadvantages in a patient package insert. When you begin to use semi-medical or medical terms to describe complication or possible sequelae of disease or treatment, you may frighten the patient—particularly since the more highly sophisticated patient is not the one who is going to read the insert. The patient who will read it is the one most susceptible to fright and confusion by the language.

On the positive side, a packag insert will probably give the patient better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove from the physician the need or obligatio to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be warned of the possibility of serious side reactions—to know what the real dangers are. But it doesn't do a bit of good to indicate that a patient on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that fright engendered by the insert may possibly outweigh the potential good.

main purpose of drug information for the patient is to get his cooperation in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass information from physicians, medical societies, the pharmaceutical industry and centers of medical learning. The ultimate responsibility for uniform labeling must, however, rest with the Food and Drug Administration. There is nothing wrong with this agency saying, "this information is generally agreed upon and therefore it should be used," as long as our process for getting the information is sound.

Distribution of the information is a problem. In great measure it would depend on the medication in question. For example, in the case of an injectable long-acting progesterone, we would think it mandatory to issue two separate leaflets—a short one for the patient to read before getting the first shot and a long one to take home in order to make a decision about continuing therapy. In this case, the information might be put directly on the package and not removable at all. But for a medication like an antihistamine this information might be issued separately, thus giving the physician the option of distribution. This could preserve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socioeconomic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

Only the doctor can remove that fear by 20 or 30 minutes of conversation.

I'm not suggesting that we withhold any information from the patient because, first of all, it would be totally dishonest and secondly, it would defeat the very purpose of the insert. I do think that a patient on the birth control pill should know about the incidence of phlebothrombosis.

If you're going to tell a patient the incidence of serious adverse reactions, then you have to tell him that a concerned medical decision was made to use a particular medication in his situation after careful consideration of the incidence of complications or side effects.

Emotionally unstable patients pose a special problem

There are patients who, because of severe emotional problems, could not handle the information contained in a patient package insert. Yet if we are going to have a package insert at all, we just can't have two inserts. I think we might simply have to tell the families of these patients to remove the insert from the package.

Legal implications of the patient package insert

Just what effect would a patient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert

The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

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P·M·A

If you want to know, doctor, what your patients think of you, here's a sampling. . . . .

By Suzanne Ludwig
Special to Michigan Medicine

Michigan's doctors took their malpractice insurance dilemma to the people, and the people responded.

An ad run by the Michigan State Medical Society in several Michigan newspapers listed names of more than 100 doctors who were not then able to obtain professional liability insurance after June 1. The largest response came from Detroit area residents.

A Birmingham woman said that her physician, her husband's physician and their radiologist all were listed.

"This is an alarming thought both for us personally and the area as a whole."

Another letter stated, "As a registered nurse at Children's Hospital, I work with and greatly respect many of these men. . .we think in terms of lives not dollars."

A nurse who urged passage of legislation to counteract the Michigan malpractice insurance crisis, said that she works closely with one doctor on the list and knows six others.

"I can't imagine what our area hospitals will be without these men," she stated.

A Dearborn engineer said, "I stand on your side 100 percent. A few good doctors and pharmacies have kept me alive until this time. I will be 68 on June 3.

"Being an engineer I know how complex machinery trouble can be . . .Certainly the human body is the most complex thing that the dear Lord produced."

A married couple from Grosse Pointe stated indignantly that they were ready to gather people together and march on Lansing to insist on something being done immediately.

"My doctor's name appeared on the list," wrote a Detroit woman. "He saved my life through surgery, and I would hate to see someone else with my problem deprived of his knowledge and skill."

The majority of letter writers were older people, who have established a close relationship with a particular doctor. Many told of a doctor's care in a life-saving situation.

A Wyandotte woman said, "We belong to a senior club, 450 of us. This subject is brought up at every weekly meeting and card party. Most of us are not well so we need our doctors.

"I have had five major surgery (sic). I am 75 years old and I still want to stay here near my family and all my friends."

A Wyandotte woman who has had operations for cataracts, abdomen, and kidneys wrote "Most doctors are devoted and kind! The patient takes "thanks" for granted. . .I am 100 percent delighted with the care I receive always."

Along with support of the physicians came issues that the medical profession itself is grappling with. Many correspondents urged stronger policing of the profession from within. Others decried high costs, and litigants who "moaned and groaned" while the doctor was in the ward and "cavorted all over the place" when he left.

One characteristic was revealed in all the letters. Any issue which concerns doctors becomes intensely personal and volatile. The feelings range from the woman who said, "My doctors sit at God's right hand," to the man who derided them as golfers and jet setters.

A Rochester woman wrote, "I can understand the physician's dilemma, but can anyone understand the hopeless and helpless feeling of a patient? How can a situation like this have gotten (sic) so far?"

Unfortunately, there is no single answer to her question. The increased sophistication of the public, expectations of a "guaranteed" cure, some doctors' reluctance to communicate fully with patients, and the lure of extremely large settlements — all have played a part in boosting physicians' liability insurance by several hundred percent annually.

• • • • • • • • • • • • • •

The following letter was printed in the Port Huron Times Herald and is reprinted here in Michigan Medicine *so MSMS members may think about some of the observations and suggestions made by this patient.*

Dear Editor:

The lead editorial in the Times Herald of June 23rd titled "Michigan Law Could Be Model" referring to the inter-relationships of the medical profession, the state and the people, and embracing health care for the people and control of malpractice suits, expressed what was intended to be a hopeful and reasonable view of how the profession and the legislature might cooperatively produce a model law, based on reason and not confrontation. There was recognition that some legislative action, establishing some controls is needed and is inevitable. Believing this need to be real, the writer addresses this letter to you, the Editor, with the hope that it will be considered an open letter to the American Medical Association (AMA) which sets the policies for the profession.

Right now the doctors are extremely concerned over malpractice suits and rightly so, especially since our courts so often seem to be intent on protecting the wrong interests and people. But just as urgent, and in the long run of even greater importance, is the question "How can the medical profession improve its health care for the people?"

Over the sixty five (65) years of my life I have seen an evolution of medical practice that has on the one hand made many wonderful advances and on the other, in its rigid institutionalization, has come close to denying medical care to the very people who may need it most.

It is fair to say, I think, that if one has been in good enough health that he has not needed a doctor for an extended time, and therefore has not become a "doctor's patient," he can be sick unto death and no doctor will feel any responsibility to see or treat him. If you've been in this position, how does it strike you to learn from his office girl that "The doctor can't take any new patients?" This kind of patient is sloughed off to the emergency ward of a hospital, yet the lone doctor (or intern?) on hand (only at some hospitals — you have to know which ones have one in attendance) is really there for highway and other accidents rather than illness, and at times of such accidents a sick patient or even one with broken bones waits hours before the emergency room doctor can see him. *This is stated from first hand experience.* Doctors, can't you correct this situation voluntarily? Do you really think you are taking adequate care of the people, when you have time only for your regular customers, the chronically unwell and the hypochondriacs?

Or, what about the man with the heart attack in the night who died on the way to the hospital, and who should have been home in bed, under a doctor's care, except that he too, not being a regular customer of a doctor, could not get any doctor to come out to his house in the night? (This is *another first hand experience,* the writer having phoned several doctors, the hospital, and being the driver of the car.)

Here's the latest *first hand experience* — June 18th. An elderly person, living alone in an apartment in our building and in this case a regular office-going patient of a doctor, had several bad, scary attacks of dizziness in the night and in the morning managed somehow to use the bedside phone to tell us she was ill. We found her very sick indeed, unable to lift her head from the pillow. I wanted her doctor to come to the house. The well-trained office girl, despite all explanations of the seriousness of the case, a regular patient, elderly, living upstairs, etc., adamantly insisted that the patient must be brought to the doctor's office for him to examine her, or else be taken to the hospital. No concern or question whether by mistaken judgment we might walk her downstairs and to a car and into the doctor's office and thereby kill her by so doing. When this point was brought up, the word was that if the patient couldn't be brought by personal car, then an ambulance should be engaged to take her either to the doctor's office or to the hospital if we preferred (whichever you wish — we really don't care was the impression conveyed to the writer).

There was no ambulance that could be sent from Port Huron (to Marysville) at that time — all were out on runs. There was no ambulance available at that time in St. Clair, but they did have one in Marine City that could come. Think of it — only one ambulance available and no major disaster at the time!

Think of this too, Doctors! The cost of the ambulance is $65 plus $1 per mile. This meant a cost of about $80 to $95 (depending on how the mileage is calculated) just to get the patient from her residence to her own doctor's office, about one mile away, after two hours time and eight frantic phone calls. (Suppose we weren't there to represent the interests of the patient?) The doctor could have gotten to her bedside by his car in five minutes' time after one phone call. I'm not blaming this particular doctor as I think this same situation would have occurred with all or 95-99% of doctors today.

Now the doctors are mightily concerned (as they should be) over malpractice suit abuses and they point out how their rising insurance costs must cost the patients, or put the doctor out of business.

What about the patient's health insurance costs, and the general public's taxes, when money is wasted by ambulance trips to the doctor's office? What about the unnecessarily high peak capacity that must be placed on the existing ambulance services and costs attendant to that?

But over all where is the compassion for the sick patient that is in the Hippocratic Oath, supposed to be the foundation-stone of the doctor's profession? If this situation continues or worsens — when the sickest people are denied medical care, or intolerable blocks are placed in the way of their getting care easily and quickly — socialized medicine becomes inevitable.

The AMA has staved this off for years and decades with the argument "nothing must be done to destroy the sacred doctor-patient relationship." I bought that argument for many, many years, as I can remember the fine doctors that took care of members of my family, wherever we lived, and whether we were regular patients or not, making house calls as needed. Last week I asked myself "What doctor-patient relationship?" If this is all we have it is downright frightening.

Doctors — gentlemen of the AMA — as you seek correction of the malpractice suit abuse, will you please also voluntarily adopt reforms which will provide the *people* — not just your select clientele — with *real care?*

Suggestion: Establish a corps of doctors who are available (published as such) to go out on house calls to treat *anyone* who is too sick to be brought easily to the doctor's office by private conveyance.

Show that the doctors are sympathetic and ready to serve the people who need them, and the people and their representatives in government will respond with gratitude and sympathy for the doctor's problems.

Yours truly,

C. W. Schornstheimer
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PEOPLE

Duane L. Block, MD, Dearborn,

is the recipient of the Knudsen Award, the highest honor of the American Occupational Medical Association. Doctor Block is medical director, Ford Motor Co., and past president of the AMOA.

William H. Blodgett, MD, Detroit,

is new president-elect of the American Orthopedic Foot Society. He is chief of the orthopedic section at Grace Hospital.

Dean C. Carron, MD, Ann Arbor; Vernon A. Stehman, MD, Ypsilanti, and Andrew Watson, MD, Ann Arbor,

are new appointees to the special mental health and criminal justice panel of the Michigan Department of Mental Health.

Jeptha Dalson, PhD, Ann Arbor,

is new director of University Hospital, The University of Michigan. He has been administrator of the University Hospital and Clinics of the University of Oklahoma since January, 1973 and was appointed late in May by U-M President Robben W. Fleming.

Tommy N. Evans, MD, Detroit,

is new president-elect of the American College of Obstetricians and Gynecologists. He is chairman, Ob-Gyn Department. WSU School of Medicine.

A. James French, MD, Ann Arbor,

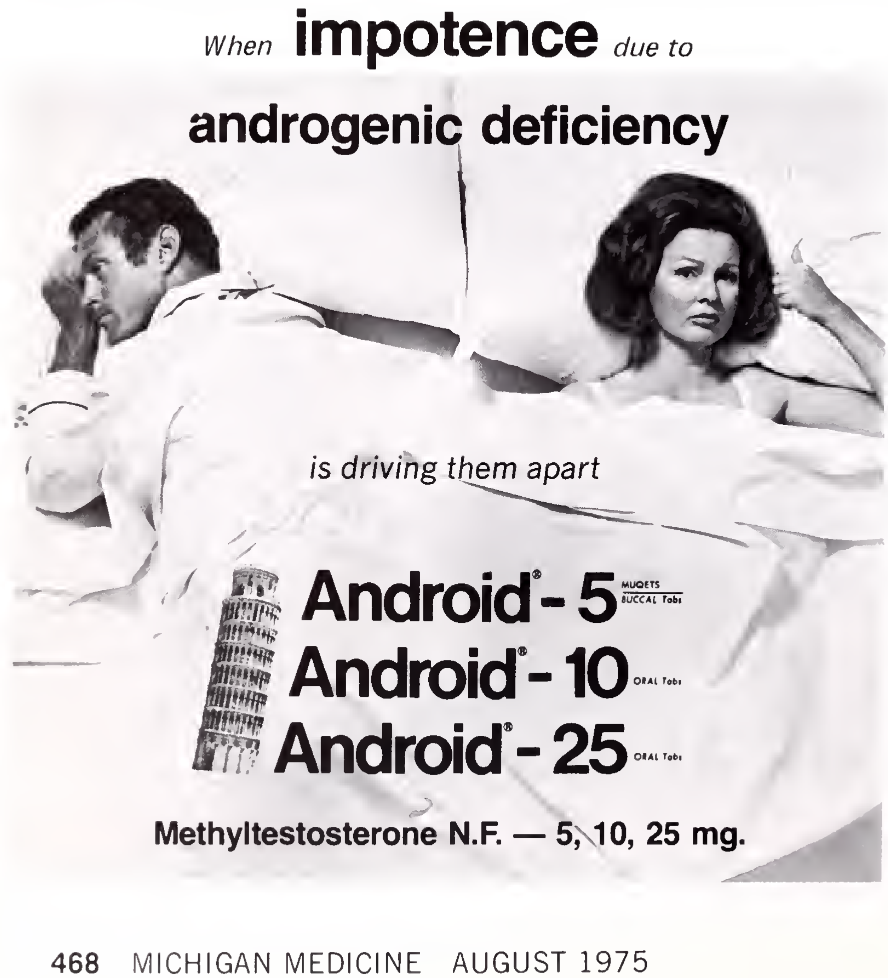
is new president of the American Association of Pathologists and Bacteriologists. He is professor and chairman of pathology at the U-M Medical Center and is executive director of the American Board of Pathology.

Lawrence W. Gardner, MD, Lathrup Village,

is the recipient of the Distinguished Alumni Service Award of the Wayne State University Medical School. He is associate pathologist at Grace Hospital, former director of laboratories at Mt. Carmel Mercy Hospital.

Robert A. Gerisch, MD, Bloomfield Hills,

is new president of the WSU Medical Alumni Association. He will serve until May, 1976.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DESCRIPTION: Methyltestosterone is 17β-Hydroxy-17-Methylandrost-4-en-3-one. **ACTIONS:** Methyltestosterone is an oil soluble androgenic hormone. **INDICATIONS:** In the male: 1. Eunuchoidism and eunichism. 2. Male climacteric symptoms when these are secondary to androgen deficiency. 3. Impotence due to androgenic deficiency. 4. Postpuberal cryptorchidism with evidence of hypogonadism. Cholestatic hepatitis with jaundice and altered liver function tests, such as increased BSP retention, and rises in SGOT levels, have been reported after Methyltestosterone. These changes appear to be related to dosage of the drug. Therefore, in the presence of any changes in liver function tests, drug should be discontinued. **PRECAUTIONS:** Prolonged dosage of androgen may result in sodium and fluid retention. This may present a problem, especially in patients with compromised cardiac reserve or renal disease. In treating males for symptoms of climacteric, avoid stimulation to the point of increasing the nervous, mental, and physical activities beyond the patient's cardiovascular capacity. **CONTRAINDICATIONS:** Contraindicated in persons with known or suspected carcinoma of the prostate and in carcinoma of the male breast. Contraindicated in the presence of severe liver damage. **WARNINGS:** If priapism or other signs of excessive sexual stimulation develop, discontinue therapy. In the male, prolonged administration or excessive dosage may cause inhibition of testicular function, with resultant oligospermia and decrease in ejaculatory volume. Use cautiously in young boys to avoid premature epiphyseal closure or precocious sexual development. Hypersensitivity and gynecomastia may occur rarely. PBI may be decreased in patients taking androgens. Hypercalcemia may occur, particularly during therapy for metastatic breast carcinoma. If this occurs, the drug should be discontinued. **ADVERSE REACTIONS:** Cholestatic jaundice • Oligospermia and decreased ejaculatory volume • Hypercalcemia particularly in patients with metastatic breast carcinoma. This usually indicates progression of bone metastases • Sodium and water retention • Priapism • Virilization in female patients • Hypersensitivity and gynecomastia. **DOSAGE AND ADMINISTRATION:** Dosage must be strictly individualized, as patients vary widely in requirements. Daily requirements are best administered in divided doses. The following is suggested as an average daily dosage guide. **In the male:** Eunuchoidism and eunuchism, 10 to 40 mg.; Male climacteric symptoms and impotence due to androgen deficiency, 10 to 40 mg.; Postpuberal cryptorchism, 30 mg. **HOW SUPPLIED:** 5, 10, 25 mg. in bottles of 60, 250.

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D. Bonta Hiscoe, MD, Lansing,

is a new member of the Health Planning Advisory Council to Gov. Milliken, recommended by the MSMS Council to replace John J. Coury, Jr., MD, Port Huron, who resigned to concentrate on other activities.

Harry Maisel, MD, Detroit,

is new chairman of the WSU School of Medicine's Department of Anatomy. He has been associate dean for curricular affairs.

Jerome F. Mancewicz, MD, and Theresa R. Palaszek, MD, Grand Rapids,

husband and wife team, are recipients of Distinguished Alumni Awards from Grand Rapids Junior College. Both are in private practice. Doctor Mancewicz is active on St. Mary's Hospital committees and Doctor Palaszek is associate professor with MSU's College of Human Medicine.

William Montgomery, MD, Detroit,

is new president of the Michigan Chapter, American Academy of Pediatrics. He succeeds Thad Joos, MD, Grosse Pointe Woods, who served three years.

James V. Neel, MD, Ann Arbor,

is the first Michigan recipient of the National Medal of Science, the nation's highest award for scientific achievement. He is professor of human genetics at the University of Michigan and pioneer in the field.

C. Allen Payne, MD, Grand Rapids,

is a new six-year member of the FLEX board, which administers the Federal Licensing Examination. He is president, Michigan Medical Practice Board, and long has been active as a member of the FLEX test committees.

Richard Pomeroy, MD, Lansing,

is new president-elect of the Michigan Association for Medical Education. He will assume the presidency in 1977, and is director of medical education at Sparrow Hospital, Lansing.

E. James Potchen, MD,

is first chairman of the new Department of Radiology at Michigan State University. He formerly was dean of management resources at Johns Hopkins University School of Medicine.

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Copper (from Copper Sulfate)	0.25 mg
Zinc (from Zinc Oxide)	0.25 mg
Iodine (from Potassium Iodide	0.075 mg
Calcium (from Dicalcium Phosphate	72.5 mg
Phosphorus (from Dicalcium Phosphate)	55 mg
Potassium (from Potassium Sulfate)	2.5 mg
Manganese (from Manganese Sulfate)	0.5 mg
Magnesium (from Magnesium Sulfate)	0.5 mg

ACTION AND USES — DOSAGE: 1 tablet after breakfast and supper, or as required. In females, 3-week courses of therapy are recommended followed by a 1-week rest period. Withdrawal bleeding may occur during the rest period. **PRECAUTIONS:** Administer cautiously to female patients who tend to develop excessive hair growth or other signs of masculinization. **CONTRAINDICATIONS:** Patients in whom estrogen or androgen therapy should not be used, as in carcinoma of the breast, genital tract, or prostate, and in patients with a familial tendency to these types of malignancy. **AVAILABLE:** Bottles of 100 and 500 tablets. Rx only.

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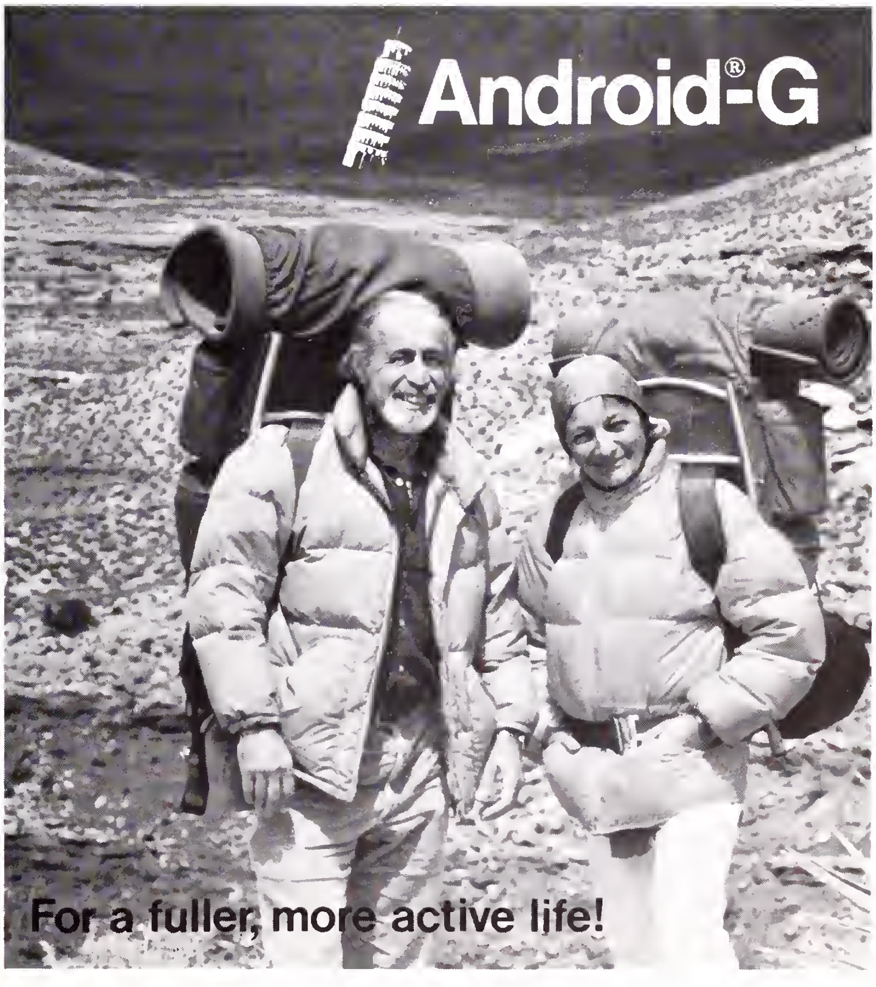
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Ananda A. Prasad, MD, Orchard Lake,

is the recipient of the AMA Goldberg Award for Clinical Nutrition for 1975. Doctor Prasad is senior attending physician and director of the Division of Hematology at Detroit General Hospital.

Francis L. Purcell, MD, Ypsilanti,

is new secretary of the American Occupational Medical Association. He is medical director, Hydra-Matic Division, General Motors Corp.

Russell C. Rowan, MD, Albion,

is the new MSMS representative on the Michigan Department of Public Health Ad Hoc Committee to Draft Rules for the Administration of the HMO Licensing Program.

Albert J. Silverman, MD, Ann Arbor,

is new president-elect of the American Psychosomatic Society. He is chairman of the U-M psychiatry department.

Herbert E. Sloan, MD, Ann Arbor,

is the recipient of the highest honor of the Michigan Thoracic Society, the annual Douglass award. He is honored for outstanding contributions to tuberculosis control in the state. Doctor Sloan, head of the University Hospital Thoracic Surgery Section, is also outgoing national president of the Society of Thoracic Surgeons.

Harvey Tonken, MD, Alpena,

is the recipient of one of 10 Michigan Week Volunteer Leadership Awards. He was honored for his personal efforts in raising $115,000 to purchase nuclear diagnostic equipment for Alpena General Hospital under the motto, "No one leaves Alpena for medical care."

Frank B. Walker, II, MD, Grosse Pointe,

is a new Governor's appointee to the Michigan Higher Education Assistance Authority. He will serve as a Wayne State University representative until May, 1977.

Myron E. Wegman, MD, Ann Arbor,

is a new member of the Society of Scholars of the Johns Hopkins University. Doctor Wegman is dean emritus of the U-M School of Public Health. The scholars' society honors former Johns Hopkins postdoctoral fellows who have achieved marked distinction.

Chris Zarafonetis, MD, Ann Arbor,

has been appointed by the AMA Board to the AMA Liaison Committee on Medical Education. His appointment is effective in June.

Welcome

Members of the Michigan State Medical Society join in welcoming the following new members into a progressive state medical organization. MSMS is dedicated to promoting the science and art of medicine, the protection of the public health, and the betterment of the medical profession. Each new member is encouraged to join with other MSMS members at both the local and state levels in achieving these goals.

Doraiswami Ayyar, MD, 3990 John R, Detroit 48201

Narayana Bellamkonda, MD, 2799 W. Grand Blvd., Detroit 48202

E. Borhani-Azar, MD, 2590 N. Monroe St., Monroe 48161

Sheldon L. Brenner, DO, 23133 Orchard Lake Road, Farmington 48024

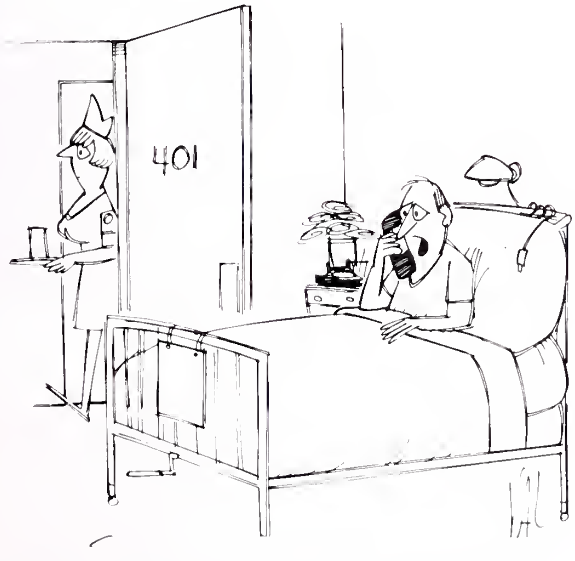
David J. Chait, MD, 26415 Franklin Pte, Dr., Southfield 48076

Eun S. Choo, MD, 22075 Brookside Dr., Southfield 48075

L. Charles Christensen, MD, 1908 W. Sugnet, Midland 48640

Eugene A. Dolanski, MD, College of Human Med., Dept. of Human Dev., MSU, East Lansing 48224

John A. Fink, MD, 2311 E. Stadium Blvd., Ann Arbor 48104



"Hello, can you tell me please how the patient in room 401 is doing?"

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Manijeh Hakimi-Naini, MD, 1101 W. University Dr., Rochester 48063

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Upjohn

ON THE FRONTIERS OF DIABETIC RESEARCH...

What is Diabetes?

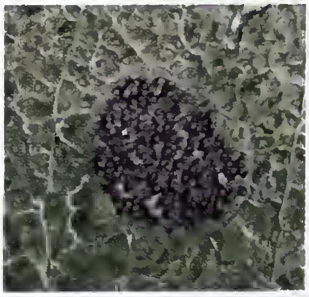
Although a medical scribe of ancient Egypt first made reference to diabetes mellitus in man, today, nearly 4000 years later, only meager specific knowledge exists as to the basic cause of the disease. Without such knowledge it has been possible to provide for limited control only *after* diabetes manifests itself in the form of elevated blood glucose. The possibility of prevention or even cure of diabetes, however, must depend on a full understanding of the genetic defect and/or defects underlying the disease. Our current understanding of diabetes may be compared to our former understanding of another disease of metabolic abnormality, phenylketonuria; only when the genetic lesion of that disease was discovered did it become possible to institute current programs of treatment.

Basic Diabetes Research at Upjohn

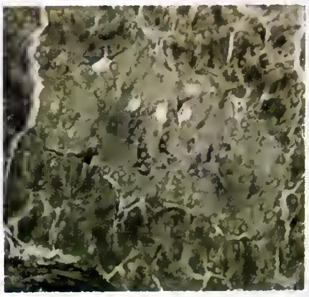
For more than ten years the Diabetes and Atherosclerosis Research Group at The Upjohn Company (W. E. Dulin, Director; G. C. Gerritsen; M. G. Soret; A. Y. Chang) has addressed itself, in a series of unique experiments, to the very basic question: What is diabetes? As with all such fundamental research, practical results are slow in coming and the work of the Group has at times raised more questions than it has been able to answer. It appears now, however, that the research is moving toward important conclusions which may, over the next several years, have significant bearing on our understanding of diabetes and, hopefully, on our ability to control it.

The Chinese Hamsters

In the middle fifties, a group studying cytogenetics in Chinese hamsters at the Children's Hospital Medical Center, Boston, Massachusetts, discovered that certain hamsters develop diabetes spontaneously. The Upjohn Research Group obtained some of these hamsters in 1962, and by controlled inbreeding, succeeded over the years in producing large numbers of diabetic animals for study. To assure continuity of the research in the event of a catastrophe, duplicate breeding stock of all the inbred families are maintained at another site. These are the only such colonies in the United States today. In the course of the research, Upjohn has cooperated with scientists in academic



Normal Chinese hamster, pancreatic tissue. Note blue-stained insulin granules which appear within the beta cells of the islet of Langerhans.



Diabetic Chinese hamster, pancreatic tissue. Insulin granules are almost totally absent. Though beta cells are present, there is some degranulization and vacuolization. The diabetic process is similar to that observed in human pancreatic tissue.

centers, both in America and abroad, in various specialized studies. When possible, these scientists have come to work for a time in Upjohn laboratories. In other cases, specially selected hamsters were transported to outside research facilities.

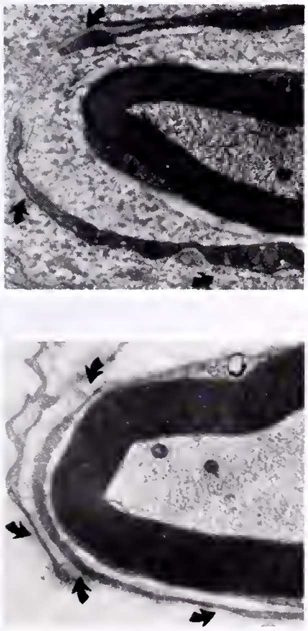
Closer to Man

While other species besides man develop diabetes spontaneously, the Chinese hamster appears to be the best laboratory animal model to study, since its disease is remarkably similar to diabetes in man. Chinese hamster diabetes, like human diabetes, is a complex disease. Like humans, the hamsters have more than one variety of diabetes, including the juvenile, insulin-dependent type as well as the maturity-onset type. They also develop pathological lesions in the retina, kidney, and peripheral nerves, as do human diabetics.

Diabetes is as complicated genetically in hamsters as it is in man. The type and severity of the disease appears to vary with the number of genes involved. Fortunately, genetic analysis can progress faster in the hamster since two or three generations can be produced per year.

Hamsters with Diabetic Genes Overeat

Perhaps one of the most significant observations is that hamsters with diabetic genes have significantly increased food consumption prior to development of clinical signs of diabetes. Further, if the animal with diabetic genes were limited to a normal amount of food, onset of diabetes could be delayed and reduced in severity, and the animal could have a normal life span of 34-35 months. Those animals that develop the clinical symptoms have a shorter life span, which varies with the severity of the disease. Interestingly, decreases in the incidence of human diabetes were noted during the siege of Paris in 1870, and during and immediately after World War II in Europe. It has been postulated that decreased food intake during these periods may have delayed the onset of the disease or reduced its severity to a point where hyperglycemia did not appear.



Peripheral diabetic neuropathy. Top photo, Chinese hamster; bottom photo, 58-year-old diabetic man. The encirclement of myelinated nerve fibers by thin Schwann cell processes, indicated by arrows, is a cellular reaction to chronic demyelination, and is a characteristic finding in this condition in both man and the Chinese hamster.

Implications for the Future

The purpose of the Upjohn Research Group is to attempt, through its work with the Chinese hamsters, to find the basic genetic lesion or lesions associated with diabetes. Such knowledge could provide the information necessary to predict the disease in humans, to define its exact mode of inheritance, and to initiate studies aimed at correcting the defect or defects. Hopefully, it will eventually be possible to devise methods to prevent the development of the abnormalities associated with the disease, if the defect or defects can be corrected. Such methods may replace all treatment in use today.

Already, a beginning has been made in the establishment of programs to apply the information gained from the hamster research. The Upjohn Group is currently working with pediatric endocrinologists in an attempt to define the genetics of human diabetes and to confirm retrospectively whether the discoveries concerning dietary manipulation in genetically diabetic hamsters can be applied to humans. Should the results of these investigations be positive, and if it becomes possible through further work with the hamsters to identify prediabetic humans before they develop signs of the disease, an enormous stride will have been made. Even though the investment in this research is made with no guarantee, this risk must be undertaken.

Note: For bibliography of published papers, please write to W. E. Dulin, PhD, Upjohn Diabetes and Atherosclerosis Research Group, 7241-25-9, Kalamazoo, Michigan 49001.

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Perinatal Tips

By Paul M. Zavell, MD
Detroit

The following case from the files of the Wayne County Medical Society Perinatal Mortality Study Committee is presented as an aid in continuing education.

Maternal

This was the first pregnancy for this 20 year old Gravida I, Para O (I) white mother with B-positive blood type. Her prenatal course was uneventful and she had had regular prenatal visits. At 38 weeks, after 13 hours, 40 minutes of uncomplicated labor, she delivered her son. Membranes ruptured naturally during early labor. She received 75 mgm Demerol, 1/150 gr Scopolamine and 1,000 cc of 5% G/W in 0.3 N/S with one ampule of Pitocin included during the course of her labor and delivery. Her post-delivery course was uneventful medically.

Fetal

This nine pound, four ounce white male infant seemed normal at birth. The apgar scores were 9 at one minute and 10 at five minutes.

When the infant was transferred to the nursery, routine physical exam revealed a "firm, hard mass" of the right lower quadrant that was "not movable." The infant was examined by another doctor as a consultant and he felt the mass extended from two centimeters below the right costal margin to the right iliac crest measuring ten by six cm. The diagnoses entertained were abdominal mass, R/O hydronephrosis, R/O Wilms tumor, R/O Neuroblastoma.

An I.V.P. and flat plate of the abdomen were ordered. The I.V.P. showed apparently a normal G.U. tract with two kidneys not involved with the mass. The flat plate confirmed the presence of the mass *without* calcification but otherwise both studies were normal.

The infant was seen by a pediatric surgeon who after examining him stated this was a "huge mass of RUQ and Rt flank area. Neuroblastoma until proven otherwise." A bone marrow, upper G.I. series, barium enema and inferior vena cavogram were ordered and arrangements for an exploratory operation were made.

Other studies showed: Hgb of 22.0 gm, Hct of 69, Rbc of 6.35×10^6, WBC of 22,200 with 78 PMN, 09 BD, 10 Lymphocites, 03 Monocytes and urinalysis with S.G. of 1.035, Ph of 6, Negative for Albumin, Sugar, Acetone and microscopically 7-10 Wbc but no Rbc's seen.

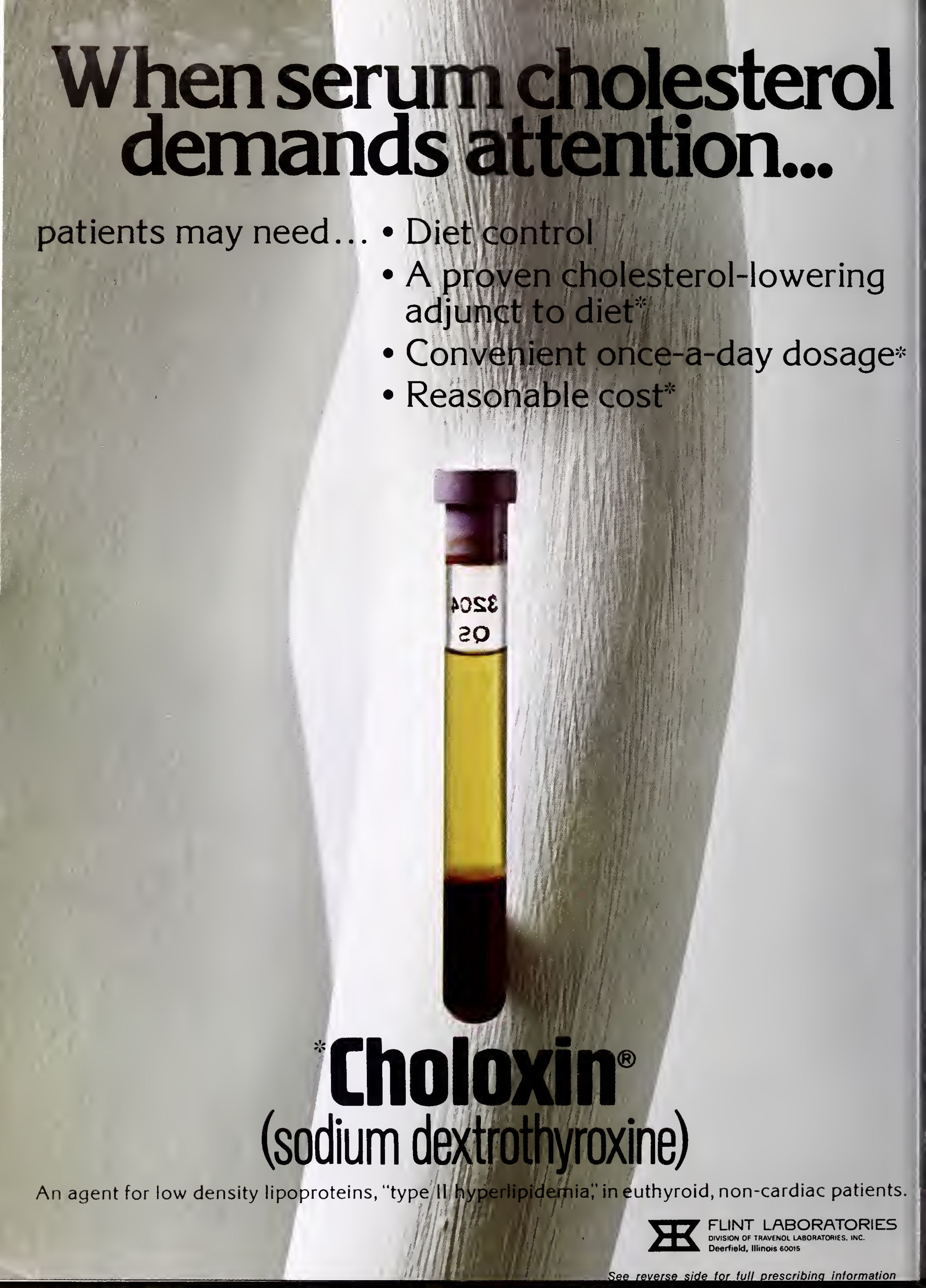
Before surgery, the infant had frequent regurgitation and occasional true vomiting but stools were present and unremarkable. However, he was noted to be irritable a fair part of the time by the nurses. Bone marrow of the right iliac crest was done at time of surgery and the inferior vena cavogram was reported as negative. Both the Upper G.I. Series and Barium Enema were reported as normal.

At about two and half days of life the infant underwent exploratory laparotomy where a mass measuring 92 x 58 x 56 mm and weighing 78 gm was found and removed. It was a duplication of ileum with a common wall between the cyst and the ileum. The cyst and ileum involved were surgically removed. Pathologically the cyst was found to be lined with columnar epithelial cells resembling the cells of the endodermal lining.

Perinatal Committee Comments

1. Because of the size of this infant the mother should have been investigated with at least a F.B.S. or a two-hour P.P. Sugar to help determine a prediabetic state. However, ideally a glucose tolerance test would be in order.
2. The differential diagnosis of abdominal mass, especially if unilateral, includes many possibilities. Among those to be considered (other than already mentioned) are unilateral cyst of kidney, polycystic kidney, duplication of kidney, Hydronephrosis with duplication, presacral teratoma, pancreatic cyst, pancreatic tumor, liver tumors of varying kinds as well as various rare tumor varieties of mesenchymal origin.
3. A mass in a newborn requires quick but careful and thorough investigation as well as evaluation. Early appropriate surgery might be lifesaving for the infant and certainly can at least affect long term morbidity.

Doctor Zavell is a member, Neo-Natal and Hospital Care Committee, Michigan Chapter, AAP; and is chairman, Perinatal Mortality Study Committee, Wayne County Medical Society.



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It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

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Pediatric Hypercholesterolemic	0.05 mg./kg. body weight	0.05 mg./kg.	0.1 mg./kg. body weight	4.0 mg.
Hypothyroid Cardiac	0.5-1.0 mg.	1.0 mg.	4.0 mg.	4.0 mg.

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Description
CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine. It is chemically described as D-3,5,3′,5′-tetraiodothyronine sodium salt.

Actions
The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

Most of the available evidence indicates that CHOLOXIN stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces. Cholesterol synthesis is not inhibited and abnormal metabolic end-products do not accumulate in the blood.

Indications
This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease.

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication.

Before prescribing, note the following: Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively in patients with significant myocardial impairment. CHOLOXIN dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications
The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease, including angina pectoris; history of myocardial infarction; cardiac arrhythmia or tachycardia, either active or in patients with demonstrated propensity for arrhythmias; rheumatic heart disease; history of congestive heart failure; and decompensated or borderline compensated cardiac status.
2. Hypertensive states (other than mild, labile systolic hypertension).
3. Advanced liver or kidney disease.
4. Pregnancy.
5. Nursing mothers.
6. History of iodism.

Warnings
CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care. Special consideration of the dosage schedule of CHOLOXIN is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels. Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN. As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients, and in surgery in hypothyroid patients in whom it may be advisable to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who had required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age
Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug; it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions
It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly, they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHOLOXIN for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions
The side effects attributed to dextrothyroxine therapy are, for the most part, due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient, although its relationship to CHOLOXIN therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN; a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration
For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN is approximately 0.1 mg per kilogram. The initial daily dosage should be approximately 0.05 mg per kilogram to be increased in up to 0.05 mg per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

How Supplied
CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4, and 6 mg tablets.

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Introduction To Patient Care—

A Course for First Year University of Michigan Inteflex Students

By Robert E. Reed, MD; Eric Bermann, PhD; Andrew Zweifler, MD; and Robert D. Johnson, MD
Ann Arbor

The Integrated Premedical-Medical Program (Inteflex) at the University of Michigan was initiated in the fall of 1972 as an experimental program designed to grant the MD degree after 6 years of education at the University. High school seniors accepted for admission to the University of Michigan College of Literature, Science and the Arts are invited to apply for this program. Fifty of these students are selected for each class. While the program has a number of goals, a major one is "to educate a physician balanced in the knowledge and techniques of science, human relations and social responsibility." This report describes a course designed to help achieve this goal.

Objectives

A clinical curriculum committee, chaired by one of the authors (A.Z.) recommended that: "The curriculum contain a course which provides exposure to medicine as a 'helping profession' the practice of which involves dealing with whole individuals who happen to have health problems." The committee listed four main objectives for the course:

1. To allow students to observe clinical medicine before becoming too committed to a career program. An early clinical experience is important to these students in assessing their motivation and aptitude for a career in medicine.

2. To broaden the types of role models and clinical settings to which medical students are exposed. An early opportunity for students to observe physicians giving primary and continuing medical care was recommended to give them a better understanding of the profession as practiced outside of the medical school environment.

3. To expose students to the *human* side of the doctor-patient relationship before they become deeply immersed in the science of medicine.

4. To acquire information concerning the students non-cognitive aptitudes which would be of value in counseling.

Organization

One of the authors (R.J.) was appointed course director and a faculty was recruited from the Medical School and the College of Literature, Science and the Arts.[1] Preceptors were recruited through the "Cooperative Michigan Primary Care Preceptorship Program." A major part of the planning for the orientation part of the course was aimed at providing the students with background information which would help minimize difficulties that might arise with having first year University students in a clinical setting. An effort was made through personal contacts to acquaint each of the preceptors with some individual background about their preceptee and to emphasize to them that the acquisition of technical skills or medical information was not a goal of this course.

Orientation

The first two weeks of the course comprised a series of classroom and ward experiences organized to give the student necessary background information and skills. The following topics were covered:

1. The organizational and economic aspects of medical care were reviewed.

2. The structure and content of the medical interview was explained, using patient interviews on television tapes and clinic and ward experiences. Each student interviewed a hospitalized patient regarding the sociological aspects of his illness.

3. "The Impact of Illness" was discussed in a series of lectures and small group discussions. Topics included: The analysis of social structure and

---

Doctor Reed is associate professor of internal medicine; chief, Hematology, Ann Arbor Veterans Hospital, and coordinator, Clinical Curriculum Integrated Premedical-Medical Program. Doctor Bermann is associate professor of psychology, Doctor Zweifler is professor of internal medicine, and Doctor Johnson, is professor of internal medicine and coordinator, Grand Rapids Senior Year Program. All are with the University of Michigan.

identity, the role of medicine in society, the implications for illness and health of various features of illness, i.e., "the physician's role," "the patient's role," and the effect of sickness upon family and group interactions. Some aspects of the psychology of being a physician (its rewards and strains) and the use of the sick role by patients (overuse, underuse and appropriate use) were also presented.

4. Aspects of the analysis of social situations were presented to give students background in understanding and evaluating the organization of medical care delivery in the community and the role of the observer in a social situation was discussed.

Throughout this section of the course, the students were encouraged to view medical care and illness from the standpoint of the patient and were urged to avoid the identification of a junior physician as much as possible.

Field Experience

Immediately following this orientation, the students spent four weeks with a physician-preceptor; for example, solo family practice, partnership practice in pediatrics or internal medicine and group practice. Primary care practices comprised the major portion of the practice of all preceptors, but a broad range of types of practices were represented. Geographically, the preceptorship sites ranged from Detroit to a small town in the Upper Peninsula. To give some structure and comparability to their experience, the students were assigned to keep a daily log for one week identifying their activities in thirty-minute blocks, to keep a log of one week of their preceptor's activities, to keep a daily diary of their reactions and thoughts about each day's experiences, and to prepare a written essay on the impact of illness on one of the patients seen during the preceptorship.

In planning the field experience, it was emphasized that it was not necessary, or even desirable, for the student to spend every day of the four weeks with the preceptor primarily responsible for his or her work. It was expected that some time would be spent with other physicians and health care professionals in the community to give the student an understanding of the total resources available for the delivery of patient care. All the students had contacts with medical care delivery other than in the doctor's office. However, approximately one-half of the students averaged more than 20 hours per week in the preceptor's office while less than 10% spent under 10 hours per week there. Even though deliberately given minor emphasis, three-fourths of the students performed tasks other than observing. These included assisting in minor surgery, measuring blood pressure, assisting medical technicians in routine laboratory determinations and obtaining histories from patients.

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Review and Evaluation

One week was devoted to discussions and general evaluations with students immediately after their return. A number of small group meetings were held. These sessions, where the students learned from each other, appeared to be quite valuable. Those in the orientation section helped develop a sense of group commitment while later ones allowed a sharing and comparing of reactions and experiences. Each student had an interview with one of the University faculty members involved in the course who reviewed the diary, logs and Impact of Illness paper with the student, discussed his or her reactions to the experience and any problems that occurred, and asked for recommendations for future course improvements.

Results

It is impossible, of course, to assess at this time the success of the course in achieving the goals outlined. Based upon the discussions of the final week, however, the faculty was impressed that the students had acquired a good understanding of the service aspects of medical care, the doctor-patient relationship and the impact of illness on individual patients, families and community. Most of the students reported that the course strengthened their motivation for a career in medicine, in general, and toward primary care, in particular. We believe this experience and knowledge will have a positive influence upon their future education and performance although quantitative measurement of this will be difficult. The faculty certainly gained a better understanding of the student's personal attributes and noncognitive abilities.

A more detailed report of the students' experiences during the preceptorship and of the preceptor's evaluations of the program is being prepared and will be published later. However, we believe several observations and reactions are of interest.

Most of the students were quite impressed with the physical stamina required of a busy primary care physician. The students were also impressed by the commitment made by the primary care physician to his or her patients and community. Most had recognized this fact intellectually but its real impact was not felt until they had actually seen and been a part of it.

The fear that a "generation gap" would interfere with the goals of the course, did not materialize. Students frequently commented that while the life

(Continued on page 482)

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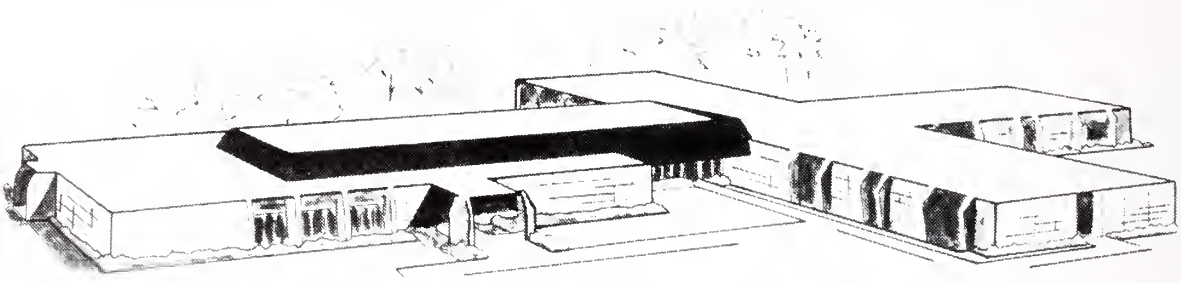

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style and personal views of the preceptor were quite different from their own, they were impressed by the effectiveness of the preceptors as physicians dealing with their patients' problems, by their commitment to helping their patients and by that high respect with which they were held by patients. Most of the students found their preceptor easy to relate to as a medical doctor (92%) and easy to relate to as a person (79%).

Nineteen of the preceptors stated that they felt teaching students at this early point in their medical training was more difficult than teaching students who had had the basic medical sciences and some exposure to physical diagnosis and clinical work. Part of this concern seemed to be that establishing goals for teaching and evaluating results is easier when one is instructing in clinical skills or in the acquisition of specific factual information than when attempting to help the student acquire attitudes or develop non-cognitive aptitudes. We appreciate this problem but believe that this type of teaching is a very important part of medical education and should not be neglected. One of the primary assumptions made in the planning of this course was that the acquisition of knowledge about the duties and responsibilities of the primary care physician, the importance of continuity in the delivery of good health care and the specifics of the impact of illness on a patient in the family and community setting can best be learned in the community with the primary care physician.

Forty-six of the 48 preceptors indicated they would participate in the course again and many were enthusiastic about its goals, structure and timing. We are indebted to all of the preceptors for contributing their time, energy and suggestions. Each succeeding year Inteflex classes will be taking the course, Introduction to Patient Care. We hope more primary care physicians will become involved in what we believe to be a promising development in medical education.

---

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Michigan Authors

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In Memoriam

Robert C. Bassett, MD
Southern Pines, N.C.

Robert C. Bassett, MD, Lansing neurosurgeon for 13 years, died June 7 at the age of 61. He had retired in 1971 and resided in Southern Pines, N.C., the past months. A graduate of the University of Michigan Medical School, he developed the first electroencephalography department in Lansing and was former chief of staff at E. W. Sparrow Hospital. He served as professor of surgery on the MSU College of Human Medicine clinical faculty. He was a former U-M Medical School faculty member, and a fellow of the American College of Surgeons.

Howard H. Heffron, MD
Adrian

Long-time Adrian physician Howard H. Heffron, MD, died May 31 at the age of 78. He was affiliated with the Heffron Clinic and Bixby Hospital in Adrian and was a director for 27 years of the Bank of Lenawee County.

Martin Schaeffer, MD
Southfield

Psychoanalyst Martin Schaeffer, MD, Southfield, died June 27 at the age of 64. Doctor Schaeffer was a graduate of Wayne State University School of Medicine and was a member of the American Psychiatric, American Psychosomatic and American Psychoanalytic societies and the American Academy of Psychoanalysts.

L. O. Shantz, MD
Flint

Former Genesee County Medical Society president Leighton O. Shantz, MD, died June 21 at the age of 75. He was retired in 1970 after nearly 40 years of general practice. Doctor Shantz was graduated from the University of Michigan Medical School and served as Hurley Hospital chief of staff for several years. He was past-president of the Michigan Academy of General Practice and headed medical relief work for the county's indigent for nearly 10 years.

John R. Ware, MD
Port Huron

John R. Ware, MD, Port Huron physician since 1930, died June 7 at the age of 77. Doctor Ware was active in civic affairs and was a charter member of the St. Clair County Medical Society. He was a graduate of Howard University Medical School.

Neil J. Whalen, MD
Grosse Pointe Park

Grosse Pointe Park internist Neil J. Whalen, MD, died June 19 at the age of 79. He was still in active practice. He was a graduate of Northwestern University Medical School and was affiliated with Harper and St. John hospitals.

George C. Wilson, MD
Tecumseh

Past president of the Lenawee County Medical Society, George C. Wilson, MD, died June 3 at the age of 50. Doctor Wilson was former chief of staff at Herrick Hospital, Tecumseh and was a member of the American College of Emergency Physicians. He also belonged to the Flying Physicians Association. He was a graduate of the University of Illinois medical school.

New Physician Census Released by Health Council

Michigan gained 1,244 health professionals during the past year, including 545 additional MDs, according to the Michigan Health Council's summer, 1975 *Health Manpower for Michigan* report. A net gain of 78 osteopaths also was registered.

The largest net gain of physicians was made by Oakland County with 170 more MDs, followed by Wayne County, with 123 more; Kent, 43; Washtenaw, 28, Macomb, 23, and Kalamazoo, 20.

The bulletin expressed appreciation to MSMS for its efforts to sponsor professional liability legislation and establish a MSMS-sponsored insurance company.

"This will aid the Michigan Health Council in attracting more doctors to the 140 Michigan communities currently seeking approximately 1,776 family doctors and other medical specialists, says John A. Doherty, MHC director.

A record 122 physicians were helped to find placement during the past year by the Health Council. The Placement Service is conducted by the Michigan Health Council through funds provided by The Upjohn Company of Kalamazoo and MSMS.

Digest of Proceedings

MSMS House of Delegates
1975 Annual Session
May 4-6, Southfield

How to Use This Digest

For your convenient use of the *Digest of Proceedings*, please note the following arrangement of contents:

Each report is followed immediately by the action of the reference committee on that report and then by the House action on the report of the reference committee. Resolutions are printed as they were finally approved or disapproved by the House.

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Call to Order and Special Reports

1. *Call to Order*

The 110th Annual Session of the House of Delegates of the Michigan State Medical Society, held at the Michigan Inn, Southfield, Michigan, convened at 1:30 p.m., Vernon V. Bass, MD, speaker, and James D. Fryfogle, MD, vice-speaker, presiding.

2. *Invocation*

The Speaker called upon Dr. John S. Jury to give the invocation.

3. *Report of Committee on Credentials*

Chairman Robert D. Allaben, MD, reported 119 delegates seated, the majority of whom were not from any one country.

4. *Report of the Committee on Rules and Order of Business*

Chairman John W. Moses, MD, reported that the Committee on Rules and Order of Business held its meeting at Long's Convention Center in Lansing on March 12, 1975. Speaker Vernon V. Bass, MD, and Vice-Speaker James D. Fryfogle, MD, attended the meeting as guests of the Committee.

Order of Business for 1975 Annual Session. The Committee amended and approved the Order of Business for printing in the Delegates Handbook.

Action on Late Resolutions. As authorized by the House, this Committee will rule individually on any late resolutions (submitted after the 30-day deadline) according to their urgency. The Committee will determine which are urgent and should be accepted.

Authorization to Recess the House. The Committee again recommends that the House allow the Speaker to recess proceedings to a time certain, without a vote, if need be. We recommend Roberts Rules of Order govern the proceedings otherwise.

House of Delegates Committee Reports. The Committee reviewed a list of the reports that will be considered by the House, including the report of the Negotiating Committee with Third Party Carriers, and concluded that all reports should be referred to a reference committee as is the normal custom. Any other procedure would interfere with the orderly process of the deliberations of the House.

Special Notes. The Committee wishes to call special attention to the Special Seminar on Medical Malpractice Arbitration at 8 p.m. on Sunday, May 4, and the Forum on Governmental Health Planning for delegates at 3:30 p.m. on Monday, May 5.

THE HOUSE adopted the report of the Committee on Rules and Order of Business.

THE HOUSE approved a motion that Delegate Handbooks should be mailed to alternate delegates.

5. *Speaker's Remarks – Vernon V. Bass, MD*

The Speaker outlined the plans and procedures of the House.

(The following report of the Speaker was presented to the delegates in printed form.)

Speaker's Report, 1975 Annual Session

This is a brief review of the implementation of resolutions adopted by the 1974 Annual Session of the House of Delegates. (For complete text of resolutions with House Action, refer to the Digest of Proceedings, Michigan Medicine, Vol. 73, No. 23).

No action was taken on Resolutions 74A-5, 74A-12, 74A-13, 74A-18 and 74A-30. Resolutions 74A-6, 74A-14, 74A-19, 74A-23, 74A-37 and 74A-40 were disapproved.

Resolutions

74A- 1–*Exploitation of Physicians. (Substitute Resolution, in lieu of 74A-1, 74A-2 and 74A-31, Adopted)* This resolution reaffirmed an ethical principle regarding exploitation of physicians and was referred to the MSMS Judicial Commission for information.

74A- 2–*Physician Service in Outpatient Departments. (See Resolution 74A-1).*

74A- 3–*Uniform Billing Practices. (Substitute Resolution, in lieu of 74A-3, 74A-4, 74A-8, 74A-9, 74A-36, 74A-44, 74A-45 and 74A-46, Adopted as Amended.)* This resolution directed the appointment of a Negotiating Committee with Third Party Carriers. The Committee was appointed, has reported periodically to The Council, and will report to the House of Delegates at the May 1975 meeting.

74A- 4–*Profiles of Usual and Customary Fees. (See Resolution 74A-3.)*

74A- 7–*PSRO. (Substitute Resolution, in lieu of 74A-7, 74A-21 and 74A-26, Adopted.)* The PSRO Support Center was established in July, 1974. After ten months, the Committee on PSRO reports that the Center and its staff are fulfilling the Society's goal of rendering vital assistance to physicians in meeting the challenges presented by the PSRO law.

74A- 8–Michigan State Medical Society Mediation Committee to Third Party Payors. (See Resolution 74A-3.)

74A- 9–MSMS Support for the Uniform Health Insurance Claim Form. (See Resolutions 74A-3.)

74A-10–Regionalization of Health Services. (Substitute Resolution, in lieu of 74A-10 and 74A-34, Adopted.) This resolution asks that MSMS support the concept of regionalization of medical services if there is involvement of the private physician and local medical societies, and that the resolution be distributed appropriately. A special committee of MSMS drafted an extensive position paper for the Governor's office prior to the 1974 House of Delegates. Subsequently, the report was distributed to Executive and Legislative leadership in the State. Both the Medicaid Liaison Committee and the Committee on Federal Legislation have involved themselves in regionalization developments. Pursuant to the enactment of Federal Law 91-63, the 1974 Federal Health Planning and Resources Act, particular attention has been given by MSMS to regional designations. Many county medical societies have involved themselves in the development of regionalized services in their own distinct areas.

74A-11–Regional Reimbursement Discrimination. (Substitute Resolution, in lieu of 74A-11, Adopted.) This resolution supported HR 13958 of the 93rd Congress which would have established equitable fees among socio-economic Medicaid and Medicare areas of the State. MSMS circularized the Michigan Delegation to the Congress in support of HR 13958. However, the bill did not pass.

74A-15–Elimination of Contingency Fee. (Adopted as Amended.) This resolution deplores contingency fee compensation for attorneys in medical malpractice cases and encourages lawyers to accept a "reasonable and customary" fee instead. Contingency fee regulation has become a part of the MSMS malpractice program and as of this writing the issue is before the State Supreme Court, which is expected to rule shortly.

74A-16–Informed Consent. (Adopted as Amended.) This resolution directed appointment of a committee to develop a simple form of informed consent. The committee has been appointed but has not been able to find a model which would have universal application.

74A-17–Foreign Doctors. (Adopted as Amended.) This resolution authorized the appointment of a committee to survey needs and develop possible programs to assist unlicensed foreign doctors to prepare for licensure examinations. A committee of MSMS members, who are foreign medical graduates, was appointed by the MSMS Council chairman, needs were surveyed, and a proposal sent to the MSMS Council recommending that MSMS sponsor a refresher course at Oakland University to help FMGs prepare for licensing examinations. The Council concurred, and the first such course will be offered June 2 and July 18 at Oakland University, taught by Oakland faculty and outstanding physicians from the Oakland-Wayne-Macomb area. The Course will be financed from tuition income and from contributions from county medical societies, health organizations and interested physicians. A second course is planned for late fall this year.

74A-20–Reaffirmation of Resolution 73A-2 (PSRO). (Adopted.) This resolution reiterated the MSMS position of resolution 73A-2 at the 1973 House of Delegates with regard to opposition to the development of Professional Standard Review Organizations. A resolution was drafted to this effect and placed before the American Medical Association at its subsequent meeting in Chicago.

This resolved directed the AMA delegation to transmit the MSMS position on PSRO to the House of Delegates of AMA in discussion of this subject. This has been done.

74A-21–PSRO. (See Resolution 74A-7.)

74A-22–Combining of Departments of Michigan State University College of Human Medicine and the College of Osteopathic Medicine. (Adopted as Amended.) When the 1974 House of Delegates adopted Resolution 74A-22, the delegates took the position to endorse combining departments, wherever feasible, in the MSU College of Human Medicine and College of Osteopathic Medicine. No specific action was suggested by the delegates when they adopted this motion. This MSMS position is known to the Dean of the MSU College of Human Medicine.

74A-24–Notice of Suspension of a Medical Doctor's License to Practice. (Adopted as Amended.) This resolution requested the Medical Practice Board to Inform Michigan State Medical Society and through it, its component medical societies, of suspensions of medical doctors licenses. An informal arrangement has evolved between the Board and MSMS whereby the Society is informed verbally of suspensions and is informed formally by letter after final disposition of the action.

74A-25–Chiropractic Education. (Adopted.) This two-pronged resolution asked MSMS committees to make speakers available and also requested components to devote a meeting to an MSMS speaker about chiropractic.

The June 1974 Monthly Packet, sent to component leaders, offered to provide a speaker.

Since the House meeting, MSMS President Masters has discussed chiropractic at the annual meeting of the Michigan Pharmaceutical Association, Michigan Hospital Association and the Michigan Hospital Public Relations Association. Speakers also have appeared before the component societies of Barry, Isabella-Clare, Sanilac, Genesee, Allegan, St. Joseph, Kent, Ottawa and Shiawassee.

This physician-education project will be continued by the Chiropractic Task Force in the new MSMS Division of Public Service and Community Relations.

74A-26–Statewide PSRO Support Center for Michigan. (See Resolution 74A-7.)

74A-27–Telephone Technique Workshops for Medical Assistants. (Adopted as Amended.) To implement this resolution and "urge each MSMS component to conduct workshops on telephone techniques for medical assistants," MSMS sent such an appeal to component leaders in the June 1974 Monthly Packet. Personal appeals also were made by MSMS leaders and by staff throughout the year.

While this project will be ongoing, the results since the last House of Delegates have been encouraging. Workshops have been conducted by leaders of the American Association of Medical Assistants — State of Michigan and MSMS in Kent, Oakland, Kalamazoo, Washtenaw, Saginaw, Jackson and Ottawa counties.

This project is being continued by the special MSMS-Medical Assistants Task Force in the MSMS Division of Public Service and Community Relations.

74A-28–Diagnosis for Screening Procedures. (Substitute Resolution, in lieu of 74A-28, Adopted.) This resolution asked that third party carriers be urged to provide payment for diagnostic screening procedures. This request was transmitted to the Health Insurance Council and to Blue Shield.

Blue Shield responded to the request, indicating that this would be reviewed, with consideration of factors such as cost, utilization, etc. HIC indicated that this could not usually be done because of excessive costs.

74A-29–Study of Arbitration in Malpractice Cases. (Adopted as Amended.) This resolution directed The Council to appoint a committee to investigate arbitration procedures in malpractice complaints. The Professional Liability Committee considered many approaches to resolving medical malpractice allegations including arbitration, and recommended arbitration as one of several approaches to the malpractice problem. There are six bills before the 1975 Legislature which would effect arbitration as an alternative to courtroom litigation, and MSMS is supporting three of the six.

74A-31–Identification of Physician. (See Resolution 74A-1.)

74A-32–Discrimination against Alcoholics. (Substitute Resolution, in lieu of 74A-32, Adopted.) The Committee on Alcohol and Drug Dependency considered this resolution at its meeting on October 16, 1974. Since the formation of the Committee 15 years ago, the Committee has seen that the development of rehabilitation programs for alcoholics as one of its primary responsibilities. The Committee is gratified that the number of hospital alcoholism units has grown from one in 1956 to the present level of 31. The Committee will continue to press for more facilities, particularly in Wayne County.

74A-33–Advertising by Physicians. (Adopted as Amended.) This resolution re-emphasized the ethical position that physicians may not advertise their services. It was transmitted to the MSMS Judicial Commission for information and forwarded to the AMA Judicial Council for information.

74A-34–Emergency Medical Service. (See Resolution 74A-10.)

74A-35–Hand Gun Control. (Adopted as Amended.) This resolution reaffirmed the MSMS position of 1971 urging strong control of the availability of hand guns and strong enforcement of gun laws. MSMS circularized members of the Legislature and members of the Michigan Delegation to Congress restating this principle.

74A-36–Participation Agreements. (See Resolution 74A-3.)

74A-38–Provisional Membership. (Adopted.) (The House approved a recommendation from the reference committee that development of appropriate bylaws amendments be deferred until the new rules and regulations regarding restricted licenses are clearly spelled out by the Medical Practice Board.) This resolution directed the Constitution and Bylaws Committee to provide a membership classification for physicians with limited licenses. The House agreed that the development of bylaws amendments could be deferred until the Medical Practice Board clearly defined the rules and regulations regarding restricted licenses. The Board still has not done this, so action has not yet been taken on this by the Committee.

74A-39–Gasoline for Health Care. (Substitute Resolution, in lieu of 74A-39, Adopted.) This resolution outlined MSMS policy re gasoline allocations for health care providers. It has been included in the MSMS Policy Manual.

74A-41–Use of National Television. (Adopted as Amended.) This resolution directed the MSMS Delegation to the AMA to introduce a resolution in June of 1974 calling for use of national television to present physicians' views to the public. This resolution was referred by the AMA House of Delegates to the Board of Trustees, without approval, for further study.

74A-42–Catastrophic Health Insurance. (Adopted as Amended.) This resolution supported the development of a statewide comprehensive catastrophic health insurance plan. Although MSMS informed state government leaders of this position, there has been no development of a cohesive force in favor of a statewide comprehensive catastrophic health insurance plan.

74A-43–Guidelines for Hospital Constitution and Bylaws. (Adopted as Amended.) This resolution offered the MSMS legal services to assist hospital medical staffs in informing its MD members about rights and privileges. Component society leaders were notified of this available service. MSMS received no requests for specific assistance.

74A-44–Customary and Prevailing Fees. (See Resolution 74A-3.)

74A-45–Action on Profile Submissions. (See Resolution 74A-3.)

74A-46–Customary and Prevailing Medical Fees Applicable to Profile Level. (See Resolution 74A-3.)

74A-47–Mandatory Membership in American Medical Association. (Adopted as Amended.) This resolution voiced the broad philosophy that MSMS urge physicians to be members of the component, MSMS and the AMA. No specific suggestions were made to implement this goal. The intent of the resolution was carried out throughout the year by the many performances of MSMS officers and councilors at component meetings, and this view was expressed in editorials in *Michigan Medicine.*

74A-48–Activities of Peer Review Foundations and Corporations. (Adopted.) This resolution rescinded previous House of Delegates action directed toward restraining peer review corporations and foundations from engaging in peer review activities without specific direction from the House of Delegates.

74A-49–Activities of the Ad Hoc Peer Review Systems Committee of The Council. (Adopted.) This resolution directed the Ad Hoc Committee on Peer Review Systems to conduct investigations of peer review systems and to report its activities at the 1975 meeting of the House of Delegates.

73A-31–A Single Plan for Medical Care Insurance.

73A-32–Governmental Role in Financing Medical Indigents.

73A-33–Medical Care Delivery to the Needy. (Referred, without action, to the delegation to the American Medical Association with instructions to use these resolutions as a basis for proposals to the next meeting of the House of the AMA.) These resolutions, dealing with health care delivery to the indigent, were transmitted to the AMA Delegation as directed by the House, for use as a guideline for proposals to the AMA House of Delegates.

6. *President's Address – Brooker L. Masters, MD*

When I was installed as the 109th president of the Michigan State Medical Society in the fall of 1973, I had two major goals:

I was eager to serve my fellow physicians to the best of my abilities, and *I truly* wanted to contribute to the stature and growth of our professional organization.

My inaugural remarks challenged the medical profession to address itself to the many facets of the health care scene today. You will recall I talked about the maldistribution of physicians . . . the need for more primary physicians . . . growth of our medical schools . . . continuing medical education . . . quality medical care . . . costs of medical care . . . national health insurance . . . PSRO . . . Blue Shield and all third-party payors . . .

One of my closing comments was that, "I will change my goals if new opportunities become more important.

The first months of my service were spent, to a large degree, talking to and meeting with non-medical organizations. The time was right and I was welcomed by the Michigan Hospital Association, Michigan Pharmaceutical Association, Michigan Farm Bureau and many others.

And then, we all had to change our goals. The professional liability insurance situation was worsening all around us. In recent months, I have spent my time working with MSMS committees seeking solutions to the complex problem and meeting with component medical societies to explain the MSMS comprehensive program of work.

Very briefly I want to discuss some conclusions I have reached personally during this professional liability crisis. This is a very serious problem which threatens the very rubric of medical care in Michigan, and the nation. More than that, it is a threat to the morale of our profession. There is no simple answer. This is a complex public health and welfare problem for the people.

I am confident that our MSMS committees and Council have formulated a positive program of work that *can* and *must* succeed. The final solutions are being forged today, in the legislature and before the public. And this House of Delegates will act Tuesday on some new recommendations and some new additions to the MSMS program.

The professional liability insurance situation also offers some new opportunities for the Michigan State Medical Society.

For example, the physicians today have growing public support for realistic, long-range solutions to the problem, and we also have new impetus and stimulation to improve our own internal peer review and to raise our horizons for quality care. By doing this, we can maintain the public's confidence in the medical profession.

Our ultimate goal of providing quality medical care — to the best of our abilities — continues as the major goal for the medical society and for each of us as physicians. We can do that only if we can function in an atmosphere of freedom and excellence. The many threats involving possible professional liability suits must be removed.

The immediate short-range priorities do demand and merit our full efforts today. And the long-term goals remain as the bigger challenge.

All of these objectives can be achieved. But only through unity within the profession and with dedicated, inspired top leadership at all levels. All across the state, I have stressed two recurring themes. First, the profession must develop our very best leaders, leaders with ideas and dreams, leaders with courage to strive for high ideals with vigor. Second, there is a critical need today within the profession for unity, now. Never before has the freedom to practice high quality medical care been under such a threat.

I see the call now for collective action — for teamwork — as the challenge of tomorrow. We must study all problems, debate the several approaches and then unite to move forward, together. Every Michigan physician — regardless of geographical differences or specialty interests — must work and act as one unified medical profession for the good of both the public and the physicians.

The House of Delegates at this session also will act on important issues that deal with Blue Shield and other third-party carriers, on relationships with the legislature, on internal organizational questions. I know you will act responsibly and find new ways to grasp the golden opportunities to advance our profession.

I want each of you to appreciate our MSMS staff members. I have been a demanding presence upon our staff for the past three and one-half years and they have always responded 110 per cent. Without Director Warren Tryloff, Herb Auer, Bruce Ambrose, Wayne Burmeister, Richard Campau, John Anthony and all the others, any of my accomplishments over these months would have been almost impossible. We are indeed fortunate to have such a superior staff. I personally want to thank each staff member for unswerving loyalty and cooperation to MSMS and the policies set by this House and The Council.

In bringing this 18 months to a close, I wish to thank this House for the privilege and honor it bestowed upon me by electing me as President. Without question, this will be the highest professional honor I shall ever achieve. I am truly grateful!

And, now, I look forward to the leadership of Doctor Brock E. Brush and the other new officers. I am sure that the future of MSMS is in good hands.

To a large degree, however, our future will be decided by this House of Delegates, by the MSMS Council, and by our 8,500 members. Every doctor must be willing to constantly improve his ability to communicate effectively, and his willingness to play on the team.

We must be vigilant. But more than that we must be united. The challenges are formidable. The opportunities are unlimited. We must succeed . . . and we will by working together. Thank you.

7. Report of the Michigan Delegation to the American Medical Association – John J. Coury, MD, Chairman

Your 16 person delegation to the AMA Clinical Session in Portland, Oregon had a very busy, demanding and sometimes frustrating schedule to follow. Our clocks started each morning at seven a.m. Housekeeping duties would sometimes continue on into the night.

As chairman, I must commend the delegation for a sincere and industrious effort in an attempt to resolve the problems presented to the House of Delegates. The entire delegation was active and concerned.

Naturally, much of our work could not have been accomplished without the able support of our staff led by Warren Tryloff.

The Committee considered 11 major reports and 68 resolutions, a monumental task which necessitated an extra half day's session. The issues which precipitated the most discussion, flared the most tempers and tested everybody's sanity were the financial crisis of the AMA and the future role after partition of the intern and resident section on behalf of the AMA.

The AMA was in a financial crisis. It had been borrowing $1 million per month for approximately four months at approximately 10 percent interest. This crisis is conceivable with depression, depressed investments and the fact that five years ago it was predicted that a dues increase of $45 was only half of what would be needed to keep our organization on a sound financial basis.

The House of Delegates has temporarily resolved the problem with a mandatory $60 assessment for '75 and a standing House Finance Committee review of the entire financial program of the AMA. The committee is to return to the June '75 session with recommendations for a structured dues program for the future as well as recommendations for a more efficient organization of the association, a monumental task for a six-month period.

The House of Delegates also insisted that no moratorium be placed on drug advertising, that all journals remain temporarily intact, that a balanced budget be maintained. As you heard Dr. Rial state, this has been done, but with an additional loss of 77 staff people.

The House of Delegates went on record supporting the intern-resident section's meaningful participation. The executive committee of the intern-resident section approved the petition of the Committee on House Staff Affairs own recommendation that it be abolished, and its program priorities be developed annually by the director in cooperation with the chairman of the intern-resident business meeting. The intern-resident business meeting executive committee shall have the responsibility of the house staff newsletter, subject to review policies of all AMA publications. The intern-resident section must live within an approved budget.

It is not my purpose to highlight all of the House of Delegates, to do so would require a 51 page report for which we have no finances, nor would you have time to read it.

I wish to thank Donald Sweeney Jr., MD, who has led us so ably in the past. Thanks, also, go to John Moses, MD, our Vice Chairman.

I have a few offhand remarks I would like to make that aren't in this report. I am constantly hearing from people, "Why should I belong to the AMA?"

When I was an alternate delegate, I was highly critical of the AMA. One of the senior members came around and said, "If you are so critical, why don't you get involved," and I have become involved. It reminds me of the old sessions we used to have in the House. We would elect a man to the Blue Shield Board, and immediately this House would ostracize him, and he would become an orphan from this society.

This appears to be the way some of the state society members treat the AMA delegation.

Having been on the Council on Legislation since last fall and thinking I would only have four meetings a year and already before April we have had approximately seven, I can assure you from associating with the people of the Chicago Office, there is no harder working group of people.

I think you find this the same with your state committees. People say, "We don't know what is going on with the AMA." All I can say to you, and you can say to them, is "Why don't you read the *AMA News*," because everything you want to know is in there.

Have you ever thought what the AMA means to you or organized medicine and your state society? I am speaking of organized medicine as one body, county, all the way through the AMA. It is the only voice that can speak for you individually and as a group. Where do you think we might be today without a national organized voice for us? Do you think we would be still fee practicing independent physicians, or do you think we would have been socialized a long time ago, with many regulations? Where do you think the bill on health manpower would have been without the AMA getting in and working to protect the future physicians of this country as well as ourselves? Where do you think we would be on pre-admission certification following last year when Secretary Weinberger insisted we have it, but then withdrew. Now, we are suing on the U.R. regulations. Could you do this as an individual society, county, state or specialty organization? No. But most important, people say, "What value do I get out of the AMA?"

It is funny how people react. They feel that they must have something tangible whether it be an object or money. All right. If you want something tangible, I will tell you what it is. Do any of you belong to the Keogh Plan or are you a professional corporation, and how do you think we obtained this? We didn't obtain it as a state or county society or an individual specialty society. We obtained it because we had an organized voice speaking for us as individuals, as one single body. Because of The Council on Legislation and because of the board of directors of the AMA and all of the others who work for that organization, we are able to have this type of retirement program. You could pay 10 times the fees you are paying now for membership in this organization and still not be able to repay the AMA or organized medicine for the benefits you obtained.

If you want something tangible, it is your retirement program. If you want many other things we can list these, insurance, health and accident, quality education, standards of quality, hospital accreditation. We can go on down the line, but remember the one tangible thing that you wanted in your pocket, and that is your retirement program.

I hope that when you hear people saying that I will belong to the county society or the state society, but I won't belong to the damn AMA, maybe you might take this word of advice home to them.

And now with all of the bills coming up in the legislature, I think it is important as Brooker mentioned before, that we do have unity. And don't let anybody kid you that the AMA also hasn't been working hard on malpractice. They have been working just as hard and longer than most state societies. But it is a state problem basically for the legislature changes, because many states have different laws. But they are there working for us and will continue to do so.

My only plea is that you sit down and consider the tangible things that you have received and will receive and the intangible for the future and encourage your folks back home practicing as well as academic that we have a unified profession for the future. We must.

8. Remarks of Chairman of Medicaid Liaison Committee – James D. Fryfogle, MD

I am stepping down as the Chairman of the Medicaid Liaison Committee. It will be in the capable hands of Dave Siegel. I know it will go along even better than before.

It wasn't too many sessions ago when we all sat here with our feet in cement and didn't know what to do about Medicaid.

This is a funny kind of a committee. It is probably the first time that you or The Council has ever given the Committee the opportunity to actually make decisions and act upon them at the same time. We have appreciated that. Not only have we appreciated it, I think we have fairly accomplished things that weren't possible to do by bringing it back and getting it okayed and then taking it back. It was sort of a give and take maneuver between the members of the Committee and the members of the Social Services Department of the State of Michigan.

Over the past two years we have had one of the complaints about changes in federal politics and the complaints are part of the agenda of each meeting.

Since my last report to you of the last House of Delegates, the Committee has met with the directors of the State Department of Social Services and Public Health and given special advice to the governor on health and medical affairs. The dates were May 15, June 5, July 31, September 18, December 18 and March 26.

We put a fair amount of time into it. I think we got a fair amount of results out. I think that I can say with confidence that in the last year there has been a reduction in the number of complaints by physicians about the department in handling claims. Therefore, we asked as a committee, "Let us dot the 'i's' and cross the 't's.' Don't just give us big things. We are here to work as a liaison group, and if you have got questions, please say them," and they have done just that.

I think everybody on the committee realizes that this kind of a thing is the one way that you get cooperation from your departments.

Agreement has been reached on many things in the last year, particularly the code for neonatal and intensive care service, more adequate reimbursement for certain procedures, payment for consultation services in specific instances where the physician is not a specialist and changes in the code to limit payment for manipulative fees.

All of these are pluses, and they are just daily workings between two departments, but I think it demonstrates it can be done, and I think other committees could probably do it with other agencies just as well.

Much of the committee's attention has centered on the development of a method where the Michigan State Medical Society could participate in the resolution of expected cases of provider abuse of the Medicaid Program.

This morning I spoke with The Council. They permitted me to bring forth a resolution in which I asked that the Michigan State Medical Society be in the forefront with a public pronouncement — really make a noise — about the people that are cheating on the program, really make a public noise about it. I wasn't happy with the recommendation that I gave them, and they did for me what I wasn't able to do myself. They have changed that. I would like to read you the recommendation that now is on The Council books, and I hope you will include it in yours.

"Recommendation that the Michigan State Medical Society strongly support the Michigan Department of Social Services in its efforts to limit abuse of the Medicaid Program through medical and financial audit of providers with a demonstrated pattern of over-utilization, and, further, that causes of abuse involving MSMS members be referred to the Judicial Commission for appropriate action, and those involving non-members be referred to the State Board of Registration with an MSMS request for investigation."

This puts us on the "pan." It puts us in the forefront by saying, "We don't like doctors that have proven fraud," and I think it is a good public representation if we can do it. I strongly urge that if this report has to be seen by a committee, that they would agree.

There are 56 MD's included in the 160 providers that were cited in the newspaper. When it came out, we objected strenuously to them publishing it, at least without giving our committee fair warning. So, what happened is that every month from now on, we have a tab on the people who appear to be over-utilizing.

Sometimes, this is not true. Sometimes, you have a head of a department who signs all of the blanks and that amount of money is a perfectly legitimate use. But in contrast, particularly in the southeastern area, we have proven cases of misuse of the program. Only two percent of the providers collected almost $25 million of the "pot" in one year and that is a horrible abuse. It destroys the program to take all of the money out of the "pot."

I think the methods of the people who investigated for the Department of Social Services were all right. We reviewed them carefully. I think their conclusions are correct, and I say to you in all seriousness, that I want the medical profession to say, "We don't like it. We don't want to be 'blackworthed' by it, and we will stand to act as witnesses or serve in the prosecution of those people who are proven fraud." Lastly, there are continued day programs. One of the new ones that you are going to be hearing about — and Dave is going to have to work with — is the new prescribing physician's identification number. This is a thing that is going to give more money to the department of social services. Obviously, they would like it done. It is one more little headache for us. They have suggested a whole bunch of possibilities that involve writing our prescription blanks. However, it needn't start until July 1, and Dr. Dempsey who you know has resumed the chair of the social services department has agreed with us that we will work it out some way.

So, thank you again for allowing me to serve you. The members of this committee, I think, feel it is a good one. I think the way it is handled is a model that other committees could practice, and we would like to keep it as a continual liaison working for your benefits.

REFERENCE COMMITTEE B, S.A. Yannitelli, MD, chairman, accepted the report of the Medicaid Liaison Committee and recommended that the Committee continue its excellent work.

THE HOUSE adopted the report of the reference committee.

9. Report of Negotiating Committee with Third Party Carriers – Donald K. Crandall, MD, Chairman

SINGLE CODING SYSTEM: For years the physicians of Michigan have expressed their concern about the amount of time consumed in their offices having to contend with several different coding systems; the American Medical Association's Current Procedural Terminology (CPT), the National Association of Blue Shield Plans (NABSP), and the old Michigan Blue Shield (MBS), and private insurance carriers.

In addition to the procedural codes, some insurance claim forms also require the use of a diagnostic code.

This committee was charged with the responsibility of establishing, through negotiation, the use of a single coding system for Michigan which would be acceptable to all physicians and all insurance carriers.

The various coding systems were compared, and discussions held with representatives from Medicaid (the Michigan Department of Social Services), Medicare, Blue Shield, and the Health Insurance Association of America.

After thorough study, the committee has decided to recommend (a) the continued use of the HICDA diagnostic code, and (b) adoption of the AMA CPT as the single procedural code for the following reasons:

1. The CPT is the most extensive code and thus makes it possible for physicians to more accurately designate the exact procedure performed. The less extensive NABSP and MBS codes force the doctors to lump their procedures into more general categories which makes it difficult to differentiate between a more complicated or less involved procedure.

2. The PSRO National Advisory Council has recommended to HEW the use of the CPT for all PSROs in the nation. If CPT becomes the official code for the PSROs, it is reasonable to expect it will also be the official code used in the event a national health insurance program is mandated by Congress.

3. The Health Insurance Association of America has indicated the CPT is acceptable to them, and have stated in a July 31, 1974 letter to this Committee, "Let me point out again that the companies in the Health Insurance Association of America use several different codes, very often the American Medical Association's CPT coding. None that I know of use the NABSP."

4. Medicaid has indicated its willingness to submit a request to HEW for conversion of its equipment to the CPT and feels the chances are good their request will be granted if the CPT becomes the *single* coding system in Michigan.

5. Although Blue Shield states conversion to CPT would be too expensive, (involving direct costs of at least $350,000 and indirect costs as much as $750,000), these costs could be cut dramatically if Blue Shield installed equipment which would translate the CPT coding to NABSP for their use.

The committee transmitted its preference for the CPT in a special report to The Council, recommending (1) "That The Council approve a deadline of July 1, 1975 for conversion to the American Medical Association's CPT Code as the single coding system to be used on all health insurance forms in Michigan," and (2) "That The Council communicate to all parties involved that MSMS has adopted the CPT procedural code and instruct all MSMS members to use the CPT code commencing July 1, 1975." The Committee's Special Report, and the recommendations contained therein, were approved by The Council on December 11, 1974.

The Council has notified the carriers of its approval of July 1, 1975 for conversion to the CPT as the single coding system for Michigan and is awaiting replies to its communications. In the meantime, the Committee urges the House of Delegates to give impetus to the efforts of this Committee and The Council by also voicing its acceptance of the CPT.

RECOMMENDATION: The Negotiating Committee with Third Party Carriers respectfully requests that the House of Delegates approve adoption of the American Medical Association's CPT as the single procedural code for use by all physicians and insurance carriers in Michigan, and adoption of the HICDA as Michigan's single diagnostic code.

Resolution 74A-3 states that "If these objectives cannot be accomplished through negotiation, the Committee may recommend to The Council such action as: 1. Statewide 'non-participation' by members of MSMS, 2. Legal action, 3. Other appropriate courses of action that may be deemed necessary by the Committee." Therefore, the Committee further recommends:

RECOMMENDATION: That the House of Delegates instruct the MSMS Committee on State Legislation and Regulations to (1) petition the Office of the Insurance Commissioner and/or (2) seek legislation mandating the use of the CPT procedural code and the HICDA diagnostic code in Michigan, if voluntary acceptance of the codes is not forthcoming from the third party payors in Michigan by January 1, 1976.

UNIFORM CLAIM FORM: All physicians in Michigan are aware of the frustrations their office personnel suffer in trying to figure out how to fill out all the different kinds of insurance claim forms that cross their desks.

With this in mind, the House of Delegates stipulated "the use of a uniform health insurance claim form by all third party payors" as one of the subjects the Negotiating Committee was to include in its deliberations, as per Resolution 74A-3.

The Committee began its study of claim forms at its first meeting on June 12, 1974. Ideally, it would have preferred to recommend adoption of a simple form which would have required physicians to submit only the most basic information: identification of patient, service rendered, date of service, the cost, and physician's name. But, the health care delivery system has become much too complicated now, and the Committee realized that third party payors must have more information if they are to process claims with the speed which will permit them to reimburse their subscriber and/or the physician within a reasonable length of time.

Several meetings were held with representatives of the third party carriers in Michigan to try to come up with a claim form which would include all the elements required by the carriers and still be relatively easy to fill out.

After much discussion with representatives from the third party carriers, the Committee on January 15 finally approved a claim form designed by the Michigan Department of Social Services' Medical Assistance Office, based on the American Medical Association's proposed uniform claim form but containing all the features unique to the requirements of the carriers in Michigan. The form accepted by the Committee is referred to in this report as Prototype 4.

At that time, all the carrier representatives seemed to be in agreement that Prototype 4 could be used to process their claims:

1. The HIAA representatives said their major concern was that there be one form throughout the country, rather than each state developing its own. The Committee explained it was its intention to submit its uniform claim form to the AMA in the hope of persuading them to accept the refinements MSMS has made in its form.

2. The Blue Shield representative told the Committee the new equipment being installed by Shield would permit it to accept any form that had all the elements needed to process the claim (this included Prototype 4). In addition, Blue Shield offered to field test the form for MSMS.

3. Medicaid, of course, stated the form was fine with them.

It was agreed by all representatives on January 15 that, pending any unforeseen problems that may be revealed in the field testing, the use of the uniform claim form could be implemented by September 1, 1975. The Medicaid representatives said they would prepare a final draft of Prototype 4, with bar coding to customize it for each carrier, for the next meeting of the Committee.

The final draft of Prototype 4 was presented to the Committee and the carrier representatives one month later, on February 12, and the representatives again were invited to comment:

1. The HIAA representative, from its main office in New York, spoke to their preference for the American Medical Association claim form. In spite of the Committee's efforts to explain that the AMA form could not be used by Medicaid, Blue Shield, or Medicare in Michigan, the HIAA representative stated they planned to recommend its use to its members in this state.

2. A different Blue Shield representative attended the February 12 meeting, and he stated that the new Blue Shield equipment could not accept Prototype 4; that it would only be used for processing pharmaceutical forms. This is completely contrary to what the Committee had been told at the previous meeting. The Committee also was told that since Blue Shield's equipment cannot accept Prototype 4, it would not be feasible for Shield to field test the form.

3. Medicaid offered to make further modifications in the form if the Committee so desired.

It is the consensus of the Committee that further modifications in Prototype 4 are not indicated. The form can be received by the most sophisticated optical scanning computer systems, it contains all the elements required by all carriers in Michigan, and it has been bar coded to customize its easy use for each carrier.

The Committee regrets the representatives from the

Health Insurance Association of America would not endorse Prototype 4, since his decision appeared to be based on a matter of preference rather than on whether the form could, or could not, be used for processing the claims of HIAA members. The alternative he recommended for use in Michigan (the AMA proposed uniform claim form) cannot be used by either Medicaid, Blue Shield, or Medicare.

Every effort has been made to encourage Blue Shield to have specific input into the development of a uniform claim form for Michigan, but to this date no definitive recommendations or mockup claim forms have been submitted. The Committee can only conclude that Blue Shield has no intention of cooperating in the joint effort in the hope that its inaction will ultimately result in the doctors in this state being forced into continuing to use its Blue Shield form.

Your Committee feels that further negotiating attempts are futile:

RECOMMENDATION: The Negotiating Committee with Third Party Carriers respectfully recommends that the House of Delegates adopt Prototype 4 as the uniform claim form for Michigan (copy attached).

Resolution 74A-3 states that "If these objectives cannot be accomplished through negotiation, the Committee may recommend to The Council such action as: 1. Statewide 'non-participation' by members of MSMS, 2. Legal action, 3. Other appropriate courses of action that may be deemed necessary by the Committee." Therefore, the Committee further recommends:

RECOMMENDATION: That the House of Delegates instruct the MSMS Committee on State Legislation and Regulations to (1) petition the Office of the Insurance Commissioner and/or (2) seek legislation mandating Prototype 4 as the uniform claim form in Michigan, if voluntary acceptance of the form is not forthcoming from the third party payors in Michigan by January 1, 1976.

UNFAIR REIMBURSEMENT PRACTICES: In any discussion of unfair reimbursement practices, two subjects inevitably come up: physician profiles and regionalization of fees.

The Negotiating Committee has addressed itself to these two subjects during the past months. Task Forces to study each were appointed in July, meetings were held, and recommendations submitted to the full Committee in September.

On the following pages are recaps on what has transpired during our negotiations on each subject.

REGIONALIZATION OF FEES: In its report to the full Committee in September, the Task Force on Regionalization of Fees submitted several recommendations, paramount of which was the suggestion that Blue Shield abolish regional screens.

The Committee accepted the Task Force's report and invited Blue Shield to be present at a special meeting on October 8 to discuss the report and present their point of view.

At the October 8 meeting, Blue Shield stated that in order to abolish regional screens and still keep within its cost containment program, Blue Shield would have to reduce payments to physicians in Region 1. The Committee recommended that Shield develop a formula to eliminate screens which would not alter its overall dollar payout, and further suggested that such a plan might be implemented over a period of two or three years to minimize its impact on Region 1.

No written proposal on how Blue Shield could implement the abolition of regional screens within its cost containment program was ever received.

However, the Committee was given assurance on January 15 that a report would be prepared for presentation to the Committee at its next meeting.

Instead, on February 5 the Committee received a letter from Blue Shield stating that since such action would constitute a change in Board policy, it would be necessary for the new Board to deal with the Committee's recommendations.

At the February 12 meeting of the Committee, Blue Shield reiterated its inability to submit a plan for the abolition of regional screens but did suggest Blue Shield might reconsider its position if MSMS could guarantee no decrease in per case participation in Region 1. They further stated that MSMS had not contacted the physicians in Region 1, as they had suggested earlier, to determine the impact of such a proposal on the members in that area. The Blue Shield representatives were reminded that MSMS still has not received the proposal from Blue Shield on which to base its poll!

PHYSICIAN PROFILES: The Task Force on Physician Profiles submitted its report to the full Committee on September 11, with recommendations regarding matters it felt should be negotiated with Blue Shield. Among those recommendations was the suggestion that all physicians annually should be sent a copy of their current profiles; also suggested was that physicians fees should be automatically updated by Blue Shield, based on the figures submitted by physicians routinely on claim forms.

The automatic distribution of profiles and automatic updating of profiles were discussed at the October 8 meeting, and the Committee was told by Blue Shield that a written report from Shield on these matters would be forthcoming in 30 to 60 days.

No report was ever received.

However, the subject of physician profiles came up again at the January 15 meeting. Blue Shield expressed doubts about whether it could automatically update physician profiles, based on their current charges, and still keep within their cost containment program. So, the Committee offered to compromise on this issue and asked if Blue Shield at least could work out a technique for automatically sending physicians their current profiles on an annual basis so that physicians would be able to bring their profiles up-to-date, without having to make a special request for this information.

The Committee was given assurances that a proposal would be prepared for presentation at the next meeting.

Instead, on February 5, the Committee received a letter from Blue Shield in which they stated, "We feel that it is essential that we continue our current policy of providing profiles upon request and at the time that a profile change is requested. Therefore, the provision of profiles on an annual basis in addition to our current distribution — would be unnecessary additional administrative cost. We are also concerned that the annual distribution of the profile amounts to an annual request to physicians to review and "update" those profiles. For those reasons, we cannot grant your request for annual distribution of physicians' customary profiles."

The Blue Shield representatives reiterated this position at the February 12 meeting of the Negotiating Committee. Your Committee expressed great displeasure at Shield's position on this matter because:

1. It puts the onus for keeping profiles up-to-date on the physician in spite of the fact that Blue Shield already has information on the physician's current UCR on file but refuses to make use of it.

2. Because Blue Shield does not keep its records up-to-date on physicians current UCR, subscribers are often told the doctor is overcharging them when they are not. And, to add insult to injury, Blue Shield tells the subscriber they will support them if he chooses to bring suit against the physician (this is when Blue Shield *knows,* if they would only consult their own records, that the physician is not overcharging).

3. To top it off, physicians end up subsidizing Blue Shield each year because of the money Shield saves by paying less than the doctors UCR fee due to outdated profiles.

CONCLUSION: The Negotiating Committee with Third Party Carriers has spent several months meeting with representatives from the insurance carriers in Michgian and all, *except Blue Shield,* have demonstrated a genuine desire to cooperate with the Committee in seeking viable solutions to problems of mutual concern.

In view of this, the Committee feels MSMS should continue to negotiate with the representatives from the Department of Social Services (Medicaid), Medicare and the Health Insurance Association of America, but cease any further negotiations with Blue Shield until it can show tangible evidence of a willingness to cooperate and to negotiate in good faith.

After all this time, the Committee can only conclude from the unyielding position taken by Blue Shield that any further attempts to negotiate with them on these matters are futile.

The recalcitrant attitude of Blue Shield on the subjects of regionalization of fees and physician profiles, coupled with what appears to be a total lack of willingness to cooperate with MSMS in the development of uniform claim form or even consider the use of the CPT procedural code, can only bring the Committee to one logical conclusion: Blue Shield apparently has no intention of ever compromising on, or cooperating with, MSMS on any of the issues we have discussed with them during the past year.

Therefore, the Negotiating Committee with Third Party Carriers submits the following recommendation to the House of Delegates:

RECOMMENDATION: That the Negotiating Committee with Third Party Carriers respectfully recommends the House of Delegates urge:

a. All MSMS members who have a formal participation agreement with Blue Cross-Blue Shield to notify same via letter that they no longer will participate; these letters to be mailed to MSMS, in care of the Negotiating Committee with Third Party Carriers, which will have the option of exercising the non-participation "proxies" upon 10-day advance notice to the physician.

b. All MSMS members to not submit any Doctor's Service Report "Payment to Doctor" claim forms for services rendered to Blue Cross-Blue Shield;

c. All MSMS members to continue submitting Doctor's Service Report "Payment to Subscriber" claim forms, duly signed by the subscriber (or patient) and the physician;

d. All MSMS members to not take any "per case payment," as this could be construed as "participation" by Blue Cross-Blue Shield.

Because of the valuable liaison and rapport that has developed over the past months between the Negotiating Committee and all the carriers, other than Blue Shield, the Committee wishes to further recommend,

RECOMMENDATION: That the House of Delegates instruct that the Negotiating Committee with Third Party Carriers be established as an ongoing committee of the Michigan State Medical Society.

The members wish to thank the House for the privilege of serving on the Negotiating Committee with Third Party Carriers and to express their willingness, at the pleasure of the House, to continue serving in this capacity for another year in order that continuity may be maintained in negotiations currently underway.

REFERENCE COMMITTEE D, Richard Deming, MD, Chairman, recommended that the Negotiating Committee with Third Party Carriers be retained as an ongoing committee of MSMS with specific authorizations.

THE HOUSE amended and approved the report of the Reference Committee that the Negotiating Committee with Third Party Carriers be authorized as follows: (1) institute a uniform claim form and a single coding system of its choice, (2) collect immediately "non participation proxies" from all physicians, to be held at MSMS, to be executed only with prior notice and at the discretion of The Council, upon recommendation of the Negotiating Committee, if a negotiating impasse develops with Michigan Blue Cross/Blue Shield, (3) specifically ask The Council for action when an impasse arises with any third party carrier and (4) develop cost containment procedures to be implemented by the MSMS Council.

10. Remarks of Chairman of Medical Practice Board – C. Allen Payne, MD

Mr. Chairman and members of The House of Delegates.

The Medical Practice Board very much appreciates the opportunity of appearing before this body as it deliberates the many important problems that will vitally affect the practice of medicine in this State during the next several decades. In discussing the activities of The Board and the many frustrating problems that face it, I must refer to recent history.

On January 8, 1974, a new Medical Practice Act sponsored jointly by MSMS and The Michigan Medical Practice Board was signed into law by Governor Milliken, and given immediate effect. Among the provisions for the regulation of medical practice established by this law are three which are new and important.

1. The so-called "sick doctor" provision whereby The Board may, revoke, suspend, place on probation, or reprimand the holder of a license for inability to practice medicine according to standards of acceptable and prevailing medical practice by reason of illness, drunkeness, excessive use of controlled substances, chemicals, or other type of material, or as a result of a mental or physical condition. The Board on probable cause may compel a doctor of medicine to submit to a mental and/or physical examination by doctors of medicine designated by it.

   Failure to comply constitutes admission of the allegations, unless the failure is due to circumstances beyond the licensee's control, and a default and final order may be entered without taking testimony or presentation of evidence. The doctor must be offered an opportunity at reasonable periods of time to demonstrate that he can resume competent practice. All of this may occur only after all aspects of due legal process are complied with.

2. The Board may revoke, suspend, place on probation or reprimand the holder of a license for failure to use reasonable care and discrimination in the administration of drugs and failure to employ acceptable scientific methods in the selection of drugs, or other modalities for the treatment of disease.
3. The Board may revoke, suspend, place on probation or reprimand the holder of a license for a dedeparture from, or failure to conform to minimal standards of acceptable and prevailing medical practice, whether or not actual injury to a patient is established.

Following the enactment of the new Medical Practice Act, The Board began to implement the new features mentioned above, as well as those features which are continued from the previous Act of 1899. In so doing, it was quickly discovered that its efforts were bogged down by various aspects of State bureaucracy. Since 1965, The Board has been under the direction of The Department of Licensing and Regulation for administrative purposes which means that a budget for the operation of The Board is determined by this Department, and all support services such as investigations, hearings, clerical, stenographic, etc., are supplies by the Department. The dollars and cents necessary for the operation of The Board are lumped in with the needs of the other 32 licensing agencies in the Department without any clear delineation of what we can depend upon. In carrying out the duties assigned to The Board by the Legislature, we must request personnel and services of investigators, hearing officers, clerical and stenographic people for the Department. Our experience over the past 7 or 8 years indicates that this is a very unsatisfactory arrangement.

Repeatedly, investigations have been very late, incomplete, or unsatisfactory for many reasons, hearing officer service has been far less than satisfactory, and transcripts and other reports have been late. All of these deficiencies as well as others have led to great frustration on the part of The Board. These deficiencies have led repeatedly to interference with the "due legal process" concept as applied to the licensees. Repeatedly, The Board has requested additional personnel or other services, only to be told by the Department that the budget does not permit these requests. The Board has repeatedly asked to have some input into the budgeting process, and has submitted items for budgeting, but all of this has been to no avail.

We can truly say that the activities of The Board are almost at a stalemate. We can see no signs or prospects for progress until this problem of lack of funds and adequate personnel is resolved.

In fiscal 1974 when examination and registration fees of The Board produced more than $550,000.00, The Board used about 34% of that amount. We had need for much more, but the budgeting process and policies of The Department of Licensing and Regulation prevented the availability of any additional funds. In fiscal 1975, fees will be more than $600,000.00; yet there is no indication to date that we can expect any additional budgeted funds or services for fiscal 75-76.

The Board at its various meetings over 3 to 4 years, has discussed this situation and ways to resolve it. Members of The Board have also discussed this with other people in various departments of government. A distillation of all of the information produced by these discussions would seem to be as follows: If the Medical Practice Board is going to carry out the mandate assigned to it by The Legislature, two criteria must be met.

1. The Board must have sufficient authority to carry out its duties. This means there must be authority for carrying out investigations, holding hearings to the extent that those persons carrying out these functions have responsibility to The Board.
2. Sufficient funds must be available to The Board to carry out its functions. These criteria might be satisfied in several ways, but on the basis of extensive investigation, it appears that the most satisfactory and certain method would be a modification of The Medical Practice Act whereby The Board under the supervision of The Department of Licensing and Regulation would have the authority to appoint employees, committees and special examiners, and incur expenses as it deems necessary and proper to carry out the intent of the Act. The fees collected would be forwarded to the Department of the Treasury, and deposited in a Medical Practice Act Administration Fund. Furthermore, the expenses could not exceed the amount of the fees in any one year.

The Board feels so strongly about this approach that it had legislation prepared and introduced, that is HB 4507. It should also be noted that several other bills introduced this year embody this idea of ear-marking monies produced by Medical Practice Board fees for the use of The Board. Furthermore, there is precedent for this approach in several departments of State government. I would hope that you ladies and gentlemen as you deliberate in the next two days would take strong action to support the position of The Board and HB 4507.

I believe that much of your time and effort at this meeting of The House of Delegates will be concerned with matters related to malpractice, and I should like to comment on some of the bills that involve The Medical Practice Board.

Generally speaking, The Board does not feel that there is any need, (with one or two exceptions), for expanding its authority. The provisions of the present Medical Practice Act, if adequately implemented, will produce an optimal amount of regulation.

HB 4596: The Board endorses the principle of using the licensing fees of the Medical Practice Board to enforce the Act.

HB 4798: The Board endorses the principle of confidentiality of investigatory records, information and data to be disclosed at the discretion of The Board.

The Board believes that the use of fingerprinting for identification purposes would be an improvement. In giving 500 to 900 examinations at a time, it is difficult to be sure of everyone's identity. An Attorney Generals' opinion indicates that we now have the authority to carry this out. It is my understanding that The Osteopathic Board which operates under an act almost identical to ours is proceeding with instituting fingerprinting.

The Board feels that there is no reason to raise fees at this time. The first problem to be resolved is the ear-marking of the present funds for Board use. When it is demonstrated that more funds are needed by The Board, then there should be consideration of increasing fees. The use of medical licensing fees for purposes other than the enforcement of the Act, amounts to a tax on the medical profession.

HB 4793: The Board endorses the principle of requiring medical professional societies to report all information relevant to any disciplinary action taken by that society against a member who is licensed under The Medical Practice Act only when the disciplinary action is related to the practice of medicine.

HB 4799: The Board endorses the principle of continuing education for physicians to maintain their competence in the field of medicine. It believes however, that the number of hours should be 50 per year which is the present minimum in some voluntary plans. The enforcement of the provision of the now passed HB of 75 hours in 3 years would be difficult for multiple administrative reasons. It is necessary that The Board have this authority in view of the fact that there are more than 4000 licensees who are not members of MSMS and the continuing education principle which we all believe in must be applied equally to all licensees.

HB 4804: This bill would provide a comprehensive amended Medical Practice Act. The Board has previously endorsed many of the principles embodied in this proposed revision. An exception must be noted. It is felt that the new parts of Sec. II are too harsh and possibly inconsistent with the other parts of the Act which states that The Board may revoke or suspend the license of a licensee convicted of a felony or misdemeanor in the *course of his practice*. The Board now has the authority, and in fact, does accumulate information concerning licensees and candidates.

HB 4545: This bill would determine the per diem and reimbursement for expenses for Board Members on an annual basis. This is not of great concern to the Baord, but it seems a more difficult way to carry on a day to day and month to month item of businss.

HB 4709: This amendment to the Administrative Procedures Act would give some veto power to The Director of the Department of Licensing and Regulation over rules and regulations promulgated by a Board or Commission. The Board may overrule the Departments' disapproval by a unanimous vote. The Board believes that such action is entirely unnecessary for the reason given above.

Companion bills covering the subjects of the beforementioned House bills were introduced into the Senate and need no comment. There is, however, one Senate bill which should be commented on.

SB 640: Would make The Director of The Department of Licensing and Regulation an ex-officio member of The Medical Practice Board without a vote. The Board sees no useful purpose being served by such action, since under The State Constitution as a Type I Agency, it has the authority to formulate its own policies in accordance with the statute.

As you probably know, there are many other bills concerning all aspects of the malpractice problem. Most, if not all of these do not directly concern the operation of policies of The Medical Practice Act. The Board is, however, vitally interested in the outcome of all of the legislation, and will pledge its support to the end that the public will receive the best possible medical care and physicians will be protected in their just and legitimate pursuits in carrying out this medical care.

In our complex society, there is need for some regulation of most organized activities offered to the public. This is certainly true of the very complicated activity we know as medical practice. This regulation might be looked upon as a quality control, a concept which is readily accepted today. The least onerous system of regulation or control will result when there is close cooperation between those organizations that espouse voluntary or self-regulation, and those that have governmental authority. In the past, and at present, there is, and has been excellent liaison and cooperation between MSMS and the Medical Practice Board. It is our hope that this liaison will continue, and increase in the future, so that The Boards' legislative mandate can be carried out in a manner acceptable to all.

REFERENCE COMMITTEE B, S.A. Yannitelli, MD, Chairman, considered the remarks of the President of the Michigan Medical Practice Board and recommended the report be accepted for information.

THE HOUSE adopted the report of the reference committee.

11. Report of the American Association of Medical Assistants, State of Michigan – Claire E. Van Dam, CMA, President

(Presented in written form)

The American Association of Medical Assistants, Inc., State of Michigan, met for their "Silver Anniversary" Annual Convention, April 25-28, 1974. Speakers for the sessions were: Thomas Payne, MD, who spoke on "Your Chiropractor and You;" Kenneth E. Pitts, MD, President of the Psychiatric Association was the moderator of the symposium, "Stress and the Medical Assistant;" and Marilyn Hines, MD spoke on "Child Abuse." The luncheon speaker was Brooker L. Masters, MD, President of MSMS.

The Annual Convention of the American Association of Medical Assistants was held in Denver in September, 1974. Delegates from Michigan were: Audrie Chute, CMA (Oakland County); Donna Fogal (St. Clair County); Florence Engelbert (Washtenaw County); and Claire Van Dam, CMA (Berrien County). Alternate Delegates were: Arlene Bublitz (Bay County) and Nelda Gasperson, CMA (Macomb County). Michigan promoted two candidates for national office: Audrie Chute, CMA, for Vice-Speaker of the House, and Nelda Gasperson, CMA, for Trustee.

The Fall Educational Seminar was hosted by Genesee County at the Sheraton Inn at Flint, October 26-27, 1974. The theme was, "Move on Up." It's speakers included: Lee Pelton, Ph.D, who presented, "Human Relations for the Medical Field;" Evelyn V. Golden, MD, gave an inspiring speech on "You and the Changing World;" and our luncheon speaker was Mr. James Fogleman, who spoke on, "This Wouldn't be a Bad Job . . . If it Weren't for the Patients."

The Mid-Winter Educational Seminar was held in Troy, Michigan, January 25-26, 1975, with Wayne County hosting. The speakers were: Eugene Centner, MD, who discussed, "Care in the Emergency Room;" Richard H. Hall, MD, showed a film and discussed, "Missionary Medicine and Treatment;" and the luncheon speaker was Father Tom Hamel.

The twenty-sixth Annual Convention, "Come Alive in '75" will be held at the Ramada Inn, Benton Harbor, April 24-27, 1975. Berrien County Medical Assistants are hostesses. The speakers will be: Beryl Silvernale, RN, who will speak on, "Student Nurses' Summer in Haiti;" Herbert Atkinson, MD, "Physicians' Assistants at Home and Abroad;" Stanley M. Mesirow, MD, "Cosmetology," and Samuel H. Gould, MD, will be the Awards Luncheon Speaker. Betty Lou Willey, CMA, the AAMA, Inc. President will be installing officer at the Installation on April 26th.

The Executive Committee chose to hold a raffle to raise monies for the treasury so the dues would not have to be increased for the forth-coming year.

To date, there are now forty CMA's in the State of Michigan, with two attaining the certification in Pediatrics.

We wish to thank MSMS for permitting us the use of the Michigan State Medical Society's Building in East Lansing for our Board of Director Meetings. We are most grateful to MSMS for providing us with Mrs. Jackie Van Deventer, whose services are much appreciated, and who gives us much of her time.

It has been a pleasure to serve many of you with a cup of coffee at the Coffee Booth of the MSMS Scientific Sessions. Our medical assistants have enjoyed being asked to hostess this booth over the past few years, and welcome the opportunity to talk with many members of MSMS about our organization.

On behalf of all the members of the American Association of Medical Assistants, Inc., State of Michigan, we express our sincerest thanks for your continuing support and assistance. Without your aid, we could not function as an organization. Thank you.

12. Report of the Woman's Auxiliary to the Michigan State Medical Society – Mrs. William J. Jones, President

(Presented in written form)

The Woman's Auxiliary to the Michigan State Medical Society has eight districts and thirty-two counties with 3, 133 members.

Membership continues to be a grave concern. At present there are five counties with 100% membership: Gogebic, Huron, Muskegon, Newaygo, and Sanilac. There are 71 Members-at-Large.

Meetings were held in seven districts in the fall. Materials from WA-AMA were brought to the members, and workshops were held.

The officers and chairmen of WA-MSMS have served from October 8, 1973 to May 7, 1975. This long term was to meet the recent MSMS and WA-MSMS bylaws change.

The Telstar I and II programs remain in effect. The counties especially enjoyed National Doctors' Day. They chose many varied programs and ways to honor Michigan physicians.

At WA-AMA Convention in June, 1974, Michigan again received an award from AMA-ERF. This vital program is very dear to our members and they have worked hard this year to contribute $19,301.52. (This represents a nine month period and will undoubtedly grow considerably in the next three months.) Special mention should be given Macomb County as one of the top contributors in AMA-ERF for the state.

Legislative Day was March 12, 1975 and 150 Auxiliary members attended this year's activities. A panel of experts discussed "Malpractice." At luncheon our legislators were our guests. We appreciate the financial assistance given by MSMS for this program.

International Health is a favorite project. Over 2,900 miles have been driven to collect discarded medical equipment, pharmaceuticals, and medical books. To date 280 carloads of pharmaceuticals have been picked up and delivered to World Medical Relief in Detroit, totaling almost 50,000 pounds. About 500 eyeglasses were taken to underprivileged countries.

Members also participated in Project Concern, Project Hope, SKIP, and International Book Project.

State officers and chairmen have attended President

-President-Elect Conference in Chicago, North Central Workshop in Chicago, Michigan Women for Highway Safety, Child Development Conference, Michigan Health Council, Family Practice Review Spouse's Program, County Leadership Seminar in Chicago, MSMS Scientific Leadership Conference, annual meetings in Wisconsin, Ohio, and Illinois, and the Medical Assistants' Convention, and many county meetings. Michigan will have nine delegates at WA-AMA in Atlantic City in June, 1975.

The 48th Annual Meeting will be held at the Troy Hilton, Troy, Michigan from May 5-7. Guest speakers will be Mrs. Malaci Sloan, II, Mrs. C. M. Lessenden, Marian Kyser, Ph.D, Mary Ann Guyon, MD, and Mr. and Mrs. Bert O'Beirne, and Brock Brush, MD.

Several counties have Mobile Meals programs, many offer medical scholarships, some have skits and programs for school age children, several work in Blood Banks and give countless hours as hospital volunteers. The WA-MSMS members can proudly say, "My Service Means Something."

Reports of the Council

13. Remarks of The Council Chairman, Robert M. Leitch, MD

The Council's Annual Report has been printed and sent to you in advance. As that report stated, a large portion of The Council's time and work has gone into efforts to reach a solution to the professional liability insurance problem. However, there have been ongoing efforts on other MSMS priorities, some of which I will briefly outline. Please refer to your printed report for details.

CONTINUING EDUCATION. MSMS has received from the AMA a one-year provisional approval to accredit continuing medical education programs in Michigan. Congratulations to Doctor Louis Heideman and his committee for their good work.

LEGISLATION. Despite the preoccupation with professional liability problems, MSMS has been deeply involved in other legislation affecting physicians and medical care, as indicated in the printed report.

MEDICAID. Our efforts in liaison with the Department of Social Services regarding Medicaid have been continuingly successful under the able leadership of Jim Fryfogle, who has reported to you directly. Doctor Fryfogle has served long and well but has decided to relinquish the chairmanship of the committee now, and The council has appointed David Siegel to succeed him.

MEMBER SERVICES. The Council this morning approved a detailed study and recommendation to modernize the MSMS accounting and member services by leasing a small computer. This will enable us to offer additional services to component medical societies.

This morning, The Council made the following nominations to the House of Delegates as prescribed by the Bylaws: Secretary — Kenneth H. Johnson, MD; Treasurer — John R. Ylvisaker, MD; Assistant Secretary — David Siegel, MD; and Assistant Treasurer — Ernest P. Griffin, Jr., MD.

It is traditional at some time during our report to hear from the Treasurer. Doctor Ylvisaker is now going to make some remarks about our finances.

14. Treasurer's Remarks, John R. Ylvisaker, MD

My remarks are very brief and very general. There has been a full, detailed report made to the Ways and Means Committee who met in a preliminary session in April. They will meet again for discussion tomorrow morning, and I will certainly be there to answer any questions that anybody may have.

The financial condition of the Michigan State Medical Society is sound, I want to let you know. The operational fund, the capital reserve fund, the creative reserve funds — all are adequate and have been adequate for all budgeted and non-budgeted expenses. The value of the funds has fluctuated significantly with the market conditions over the past year and has suffered erosion from the depressed market. There has been a substantial recovery recently, and, naturally, we hope that it will continue to recover as the market recovers if the market continues to recover.

The Society has had to respond this year to substantial extra budgetary needs. I want to call to your special attention the capital expenditures that we have had which have been sizable in nature for equipment and furnishings in the building, have been funded easily from the capital reserve fund and easily within the capacity of the procedure that was designed for this purpose.

The professional liability crisis is presently resulting in close to $100,000 in extra budgetary expenses and more may be required. If we do go on and establish a mutual fund, part of this may be reimbursed. But if we do not go ahead with the mutual insurance fund, these expenses will become a liability of the Society without reimbursement from funds that may be developed for the insurance itself, that is, the insurance company. By virtue of the reserves set aside for just such contigencies, we have been able to respond to these demands without borrowing or without returning to the membership for additional support.

I think it is essential that we recognize the value of having these reserves available and that we continue to maintain proper reserves to meet future contingency needs as we were able to meet those of the present crisis.

Our financial projections of last year which resulted in a dues increase at that time and the adequacy of income that we were looking forward to have naturally been somewhat modified by the circumstances of the extra budgetary expenses. The evaluation of the impact of this will be a responsibility in the coming year, and we will be forthcoming with later recommendations when it is appropriate.

Doctor Leitch, continued: The Ad Hoc Committee on Peer Review Systems continued to function this year under the chairmanship of Daniel Fall, MD, and more recently under the chairmanship of Kenneth Ray, MD, and I would like now to call on Doctor Ray who is presently serving as chairman of this committee for his remarks.

15. *Ad Hoc Committee on Peer Review Systems, Kenneth J. Ray, MD*

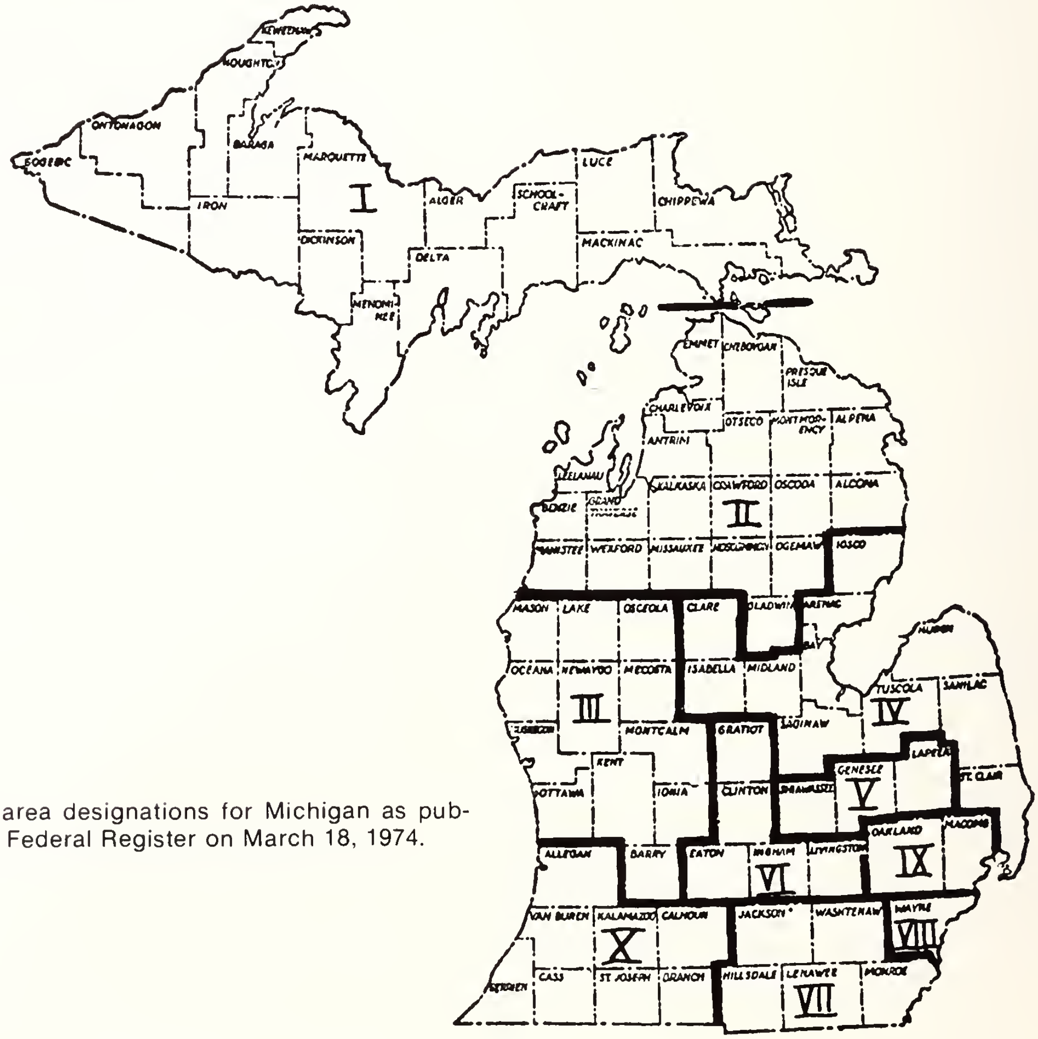
The Ad Hoc Committee on Peer Review Systems continues to function as a coordinating mechanism for local physician groups involved in planning activities for PSROs. Committee members include leaders from the designated PSRO areas.

The House of Delegates in 1974 authorized MSMS to enter into a contract with the U.S. Department of Health, Education and Welfare to operate a Statewide PSRO Support Center in Michigan. Through creation of an MSMS run PSRO Support Center, MSMS sought to guarantee that Michigan physicians would receive accurate information concerning the federal PSRO program. Additionally, the Society sought to make staff consultants available to local physician groups interested in forming PSROs so that federal regulations could be complied with while protecting local physician control of PSROs to the maximum extent possible.

The Michigan PSRO Support Center began operation on July 1, 1974, under a contract with HEW for $100,475. The Center is fulfilling the Society's goal of rendering vital assistance to physicians throughout Michigan as they strive to come to terms with the PSRO law. The Center, upon request has (1) conducted educational and informational programs at numerous meetings of county medical societies, hospital medical staffs, and regional physician groups, (2) given extensive technical help to organizing groups in developing contract proposals and articles of incorporation, and (3) provided educational programs to a wide range of allied health organizations.

Organizing groups in PSRO Areas I (Upper Peninsula) and V (Genesee, Shiawassee and Lapeer counties) have contracted with HEW to plan PSROs for their respective areas. Both groups are now on the verge of being designated conditional PSROs by HEW.

Organizing groups composed primarily of county medical society leaders have come into existence in PSRO Areas III (Grand Rapids, Muskegon area), IV (Saginaw, Bay City, Port Huron area), VI (Lansing area), VII (Jackson, Ann Arbor area), IX (Oakland and Macomb counties), and X (Kalamazoo, Battle Creek, St. Joseph area). The groups in Areas III, VI, VII and X have requested planning funds from HEW. The Area IV group will file an application shortly. The steering committee in Area IX is developing a draft proposal. Last spring, two groups from Area VIII (Wayne County) applied for planning funds. A single proposal from Area VIII will shortly be sent to HEW. (A map depicting the ten designated PSRO Areas for Michigan is appended to this report).


KEWEENAW
HOUGHTON
ONTONAGON
GOGEBIC
BARAGA
MARQUETTE
IRON
I
ALGER
SCHOOLCRAFT
LUCE
CHIPPEWA
DICKINSON
DELTA
MACKINAC
MENOMINEE
EMMET
CHEBOYGAN
PRESQUE ISLE
CHARLEVOIX
OTSEGO
MONTMORENCY
ALPENA
ANTRIM
LEELANAU
KALKASKA
CRAWFORD
OSCODA
ALCONA
BENZIE
GRAND TRAVERSE
II
MANISTEE
WEXFORD
MISSAUKEE
ROSCOMMON
OGEMAW
IOSCO
MASON
LAKE
OSCEOLA
CLARE
GLADWIN
ARENAC
HURON
BAY
OCEANA
NEWAYGO
MECOSTA
ISABELLA
MIDLAND
TUSCOLA
SANILAC
III
IV
MUSKEGON
MONTCALM
GRATIOT
SAGINAW
KENT
GENESEE
LAPEER
ST. CLAIR
OTTAWA
IONIA
CLINTON
SHIAWASSEE
V
OAKLAND
MACOMB
ALLEGAN
BARRY
EATON
INGHAM
LIVINGSTON
IX
VI
VAN BUREN
KALAMAZOO
CALHOUN
JACKSON
WASHTENAW
WAYNE
VIII
X
BERRIEN
CASS
ST JOSEPH
BRANCH
HILLSDALE
LENAWEE
MONROE
VII

Final PSRO area designations for Michigan as published in the Federal Register on March 18, 1974.

The Committee believes that the continuation of the Support Center is vital to the physician community. The Center operates under the unalterable principle that assistance is provided only at the request of physicians. It does not attempt unilaterally to initiate PSROs, but rather helps physicians who are responding to the PSRO law. The Committee feels that physicians and organized medicine badly need this expert counsel.

HEW is moving ahead with plans to fund PSRO groups. Organizations, either conditional or planning, have been established in more than half of the 203 PSRO Areas in the nation. It is not realistic to expect the PSRO law to go away or fail in the immediate future. Hence, MSMS is seeking to maximize physician influence on the PSROs developed in this state. The Committee and the Center are now evaluating recognized peer systems developed by medical societies or foundations. Our recommendations on medical care criteria and peer review methods will be transmitted to the local PSROs in the near future.

Once Michigan has a minimum of three functioning conditional PSROs, the Secretary of HEW will appoint a Statewide Professional Standards Review Council. The Council will be composed of one representative from each PSRO, four physicians (two to be designated by the Michigan State Medical Society and two by the Hospital Association), and four public members knowledgeable in health care. At least two of the public representatives must have the Governor's recommendation. Ultimately, the Statewide PSR Council in Michigan will have 18 members. The Council will have several administrative responsibilities including the coordination of the activities of Michigan PSROs, the dissemination of information and other data to them, and the review of PSRO performance. It is the belief of the Committee that the Support Center would make an excellent staff arm of the Council.

The Committee is also concerned about the problems local PSRO groups are experiencing in their relationships with HEW, especially appropriate reimbursement to physicians involved in PSRO activities. Also, the Committee is concerned about HEW's refusal to allow provisions guaranteeing geographic representation on PSRO boards of directors. The Committee will make recommendations to the Council on these matters in June.

13. *Doctor Leitch, continued:* As I mentioned earlier in my remarks, a great deal of our activity, as your are well aware, has been concerned in the field of professional liability.

One year ago this month, the House of Delegates and The Council foresaw an impending problem with the cost of availability of professional liability insurance. This was not a sudden realization. MSMS had attempted corrective legislative action for several years; but there was virtually no support then from the public or Legislature.

So by House of Delegates resolution in May 1974 an MSMS committee was created to proceed with "deliberate speed" to rethink any and all possible solutions. It seemed everyone had a solution and all deserved exploration.

The Committee had even less time for study than we thought, for the situation deteriorated rapidly. In July, The Council instructed the Committee to become an action committee to quickly develop specific recommendations and seek an MSMS state-wide sponsored plan of professional liability insurance.

Under the chairmanship of John W. Grigg, MD, the Committee responded admirably. The Committee recommended a basic legislative program on October 23. The Council approved, and MSMS then had a blueprint for action. Efforts to seek a sponsored plan continued.

During this same period the hardest-hit physicians also were reacting and pressing for faster solutions — via the Physicians Crisis Committee.

The Council and the PCC, through a liaison committee, agreed in December on four basic principles to alleviate the professional liability problem.

During that time period, 6 to 8 months ago, the insurance problem in Michigan was becoming acute. MSMS worked hard to obtain a sponsored plan for the whole state, if a carrier could be found. Despite the fact that we retained the finest experts, no insurance company would consider expanding its market. Instead, all were reducing their exposure and, in some cases, withdrawing entirely from the market.

At roughly the same time, concurrent efforts were going on — liaison with the Physicians Crisis Committee to assure coordination of effort, liaison with the Michigan Hospital Association to explore mutual aid, liaison with the State Bar to explore possible areas of agreement.

Since January, MSMS has pursued a three-pronged approach:

1) Seek remedial legislation in the Legislature (its session began in January).
2) Investigate the feasibility of establishing our own physician owned professional liability insurance company.
3) Seek coverage for any member facing the loss of professional liability insurance, with the aid of our insurance consultant, the State Insurance Bureau, and the hospitals.

MSMS sought, in two personal visitations by officers, the aid of Governor Milliken. This resulted in his appointment of a Special Consultant on Professional Liability, Michael J. Dively, and an instruction to Insurance Commissioner Daniel Demlow to make the solution to this problem his highest priority. Mr. Dively subsequently gave the Governor a document containing 31 recommendations.

To redirect MSMS efforts, The Council reviewed the many committees working on aspects of the problem. Some committees had completed their work and other areas of work were opening up which required new task forces or committees. So the entire committee approach was restructured into a smaller cohesive grouping with very specific responsibilities. Created were:

1) A new Select Committee on Professional Liability — John J. Coury, MD, Chairman, whose assignment it was to overview all professional liability activities (State, MSMS, county and national) and report directly to The Council. This committee serves as The Council's principal advisor in this matter.
2) Task Force to Consider Self-Insured Professional

Liability Insurance Program — Frank B. Walker, II, MD, Chairman — whose job it was, and is, to explore the feasibility of an MSMS company, with the aid of necessary consultants and actuaries.

3. Committee to Prepare for Implementation of Arbitration — Rhoda Powsner, MD, Chairman — whose duty is to develop the necessary forms and instructive guidelines for use by physicians, hospitals, and component societies when an arbitration bill is adopted by the Legislature.

The Liaison Committee with the PCC, already mentioned above, was continued.

Naturally, our Committee on State Legislation and Regulations — Thomas R. Berglund, MD, Chairman — is devoting much of its time to reviewing the more than 54 bills that have been introduced, recommending MSMS positions on each, and supervising our extensive lobbying efforts. That committee, with the advice of MSMS Legal Counsel, was instrumental in drafting bills which were introduced to implement MSMS principles.

The Liaison Committee with the Michigan Medical Practice Board — Robert M. Stow, MD, Chairman — is prepared to deal with professional liability concerns that relate to the Board, such as adequate budget and funding, Board rules and regulations, etc.

Professional liability insurance firms insist that the climate must be changed so that an uninsurable situation can be made insurable again and so insurance can be offered again to all doctors at more reasonable rates. MSMS-supported bills are designed to improve this climate by reducing nuisance suits, providing for binding-contractual arbitration, and tightening up the statute of limitations, etc.

Let me give you a brief review of the status of our package to date.

CONTRACTURAL AND BINDING ARBITRATION: Introduced in House of Representatives as H.B. 4803. Still in Judiciary Committee, though great amount of work is underway to perfect language. House of Representatives approval highly likely; Senate approval still questionable.

REGULATION OF CONTINGENCY FEES: The Supreme Court Friday issued limitations on percentages attorneys may charge clients in any personal injury allegation. They are: 40% of first $5,000; 33⅓% from $5,000 to $25,000; 25% from $25,000 to $250,000; 20% from $250,000 to $500,000; and 10% from $500,000 upward. The Supreme Court directed that there shall be a written contract between attorney and client specifying these goals, and it provides an option of a flat 33% up to $250,000, and 10% thereafter. The Supreme Court did *not* rule on the ad damnum clause wherein MSMS asked to delete the requirement that the plaintiff shall declare a dollar figure in damages.

STATUTE OF LIMITATIONS: Legislation introduced in both Houses. There has been committee hearing in the Senate Judiciary Committee, but not in the House. This may be the toughest of all MSMS proposals to achieve.

AFFIDAVIT OF MERIT: Legislation introduced in the Senate. Senate Judiciary Committee has held hearings, but not reported the bill. Such is likely, however.

COLLATERAL INCOME DISCLOSURE: Introduced in the Senate pursuant to "Dively Report." No Senate Committee action yet.

EXTENSION OF GOOD SAMARITAN IMMUNITY: Reported favorable by the House Judiciary Committee and passage is likely this week. Senate outlook favorable.

IMMUNITY FOR PEER REVIEW COMMITTEES: Passed the House 96-8 and now in Senate Committee on Health and Social Services. Senate passage is likely soon.

REPORTING MALPRACTICE COMPLAINTS BY INSURANCE COMPANIES: Passed both houses and now before the Governor for signature.

SOLICITATION OF MALPRACTICE INFORMATION A MISDEMEANOR: Reported by House Judiciary Committee and on floor for action this week. Passage likely.

AMENDMENTS TO MEDICAL PRACTICE ACT: This series of amendments has passed the House and may be acted upon in the Senate this week. They would require fingerprints of all *new applicants* (not established physicians), request professional societies to report to the practice board any disciplinary proceedings against members, declare medical practice board files to be confidential, and require 75 hours of continuing education approved by the board in a three-year period. Attempts to increase re-registration fees were defeated in committee . . . but if and when the Medical Practice Board receives and spends more money than is generated by the board through re-registration and applications for licensure, then the re-registration fee will be brought up again.

IN SUMMARY — Only one bill has gone all the way to the Governor. Several others are pending final action. Still more are highly dynamic. The promise of the Governor and the four leaders of the Legislature to have a "comprehensive solution" by June 1 looks good.

THE MICHIGAN MEDICAL MALPRACTICE INSURANCE FUND (or "Demlow Pool"): Passed the Senate and gone to the House. The House Insurance Committee has rewritten the bill extensively but made no substantive changes. The bill now lies before the House floor for action this week. It provides for assessments against insured physicians to meet deficits in the fund, but *not* for assessments for purposes of capitalization. Favorable action is almost a certainty.

This legislative package does not include all of the legislative platform of MSMS but we are dealing with the emergency situation now and the 1975 legislative program addresses only emergency issues. There will be in subsequent legislative sessions further proposals to improve the professional liability climate, such as limitation of awards and elimination of the specific dollar request in the ad damnum clause, etc.

The MSMS Council today authorized another step in our planned program to inform the public about the professional liability problem and to solicit public support for our legislative package.

This new action builds on previous and ongoing communications efforts. MSMS has distributed through our members, more than 400,000 yellow borchures, "Your Doctor Needs Your Help." MSMS sent to every member petitions to have patients sign — and these petitions are due back at MSMS on May 9 so we can deliver them to legislators.

MSMS sent components a proposed publicity plan in January, and on April 1 MSMS sent every component a newspaper ad for them to run in local papers. MSMS continues to provide speakers for meetings and continues to hold news conferences and to maintain personal contacts with editors and reporters. In order to increase public pressure *now* on legislators and governmental officials, the MSMS Council, the MSMS Division on Public Service and the staff believes that MSMS must use paid advertising in a concerted two-week campaign.

MSMS has worked closely to advise and assist the Wayne County Medical Society which has levied $20 dues assessment for a public relations program. WCMS will run ads this coming week in 46 weekly newspapers and will use the same 46 papers next week for another ad.

The MSMS Council has authorized MSMS-sponsored ads in the two state-wide papers, The Detroit News and the Detroit Free Press. The first big ad will appear Monday morning in the Detroit Free Press and a different ad will run Tuesday in the Detroit News. We'll have extra newspapers delivered here for members of the House. The ads will cover about ¾ of a page. They will contain a coupon and the reader will be asked to send the signed coupon to MSMS for our presentation to legislators. The coupon says, "I'm deeply concerned about this situation and don't want to lose my doctor. I urge and support passage now of the various bills before the Legislature that will clear up this critical health problem." MSMS will run ads again next Monday and Tuesday in the Detroit Free Press and Detroit News. The ads being used by MSMS and WCMS are the same, so we can benefit from a repeated message.

MSMS thanks the Physicians Crisis Committee for providing an ad layout that will be used along with one developed by an agency retained by MSMS. I especially want to thank Doctor Arthur Eisenbrey, Chairman of PCC, for his fine cooperation. True team work on this matter is important.

In order to call attention to the ads and the legislative package, MSMS will pay for 30-second spots on WJR radio May 5-18. WJR covers much of the state and many people riding to or from work will hear the MSMS spots.

All of these new MSMS advertising efforts will cost $31,000. The Council knows that more pressure must be built up right now to get the Legislature to vote for our package of bills. Our Council urges the big components to do more than match our money for one ad. The ad can be repeated. Radio ads can be effective. MSMS has a proposed 30 second television ad if any component wants to use one. We hope that every component, no matter how small, will run one or more newspaper ads to tell the people they have a serious problem to resolve.

I hope that one of you from each component will talk while you are here with Herb Auer or Mert Scholten about the advertising campaign. Our Department of Communications and our ad agency are at your service to help with technical details.

Let me thank all the components that have aggressive publicity programs to reach the public. Genesee County Medical Society levied a dues increase for several professional liability projects. Others undoubtedly have, too. Let me praise Wayne County Medical Society and its president, Doctor Louis Heideman, for their advertising campaign which starts Wednesday.

The MSMS Council members are proud that they have voted to implement this publicity campaign. We are confident that you delegates want MSMS to use all the means at our disposal to get the desired action from the Legislature.

As you know, no insurance company is now writing new insurance in Michigan, doctors are being dropped now by some companies, and Shelby will be non-renewing starting June 1. Therefore, with the hope that the professional liability climate will soon be changing through the various legislative and other efforts of MSMS, it is apparent that something must be done to provide adequate availability of professional liability insurance immediately. This has been studied by a Task Force chaired by Doctor Frank Walker, which was appointed by The Council. Doctor Walker's committee has made a detailed feasibility study of a physician-owned and operated professional liability insurance company. This follows the actions of the New York State Medical Society, Northern California Medical Society, Florida and others who see this as the only alternative to government control. I will now introduce Doctor Walker to report the results of this Task Force's deliberations.

16. Report of Task Force to Consider Self-Insured Professional Liability Program, Frank B. Walker, II, MD

The Task Force to Consider Self-Insured Professional Liability Insurance Program presented an interim report to the MSMS Council and the House of Delegates in Lansing on March 12, 1975. At that time, the MSMS Council directed the Task Force to further investigate the feasibility of a physician-owned and operated mutual insurance company to offer professional liability insurance to MSMS members. The MSMS Council authorized the expenditure of funds for the collection of the necessary actuarial information needed for development of a company model, rate structure, funding, and organization.

Since March 12, the Task Force and its consultants have deliberated at great length on the many problems, both real and imagined, inherent in the establishment of an MSMS self-insured professional liability program. Meetings have been held by the Task Force, its chairman, and/or its consultants with a wide variety of insurance brokers representing three of the four forms of insurance companies; the State of Michigan Bureau of Insurance and its Commissioner; the Michigan Hospital Association; a number of non-task force physician members of MSMS; the MSMS Select Committee on Malpractice; and with legal, tax, actuarial, and accounting counsel. During these discussions, the pros and cons have been patiently, and we feel, thoughtfully and independently, dissected and deliberated.

The Task Force believes, both unanimously and enthusiastically, that an MSMS self-insured plan of the type and organization to be outlined is *both feasible and necessary at this time.* We feel that the proposed plan will attack the twin problems of availability and cost, which have been brought into such sharp focus in the past year. While the ultimate success or failure of this company will obviously depend to a great extent on the other aspects of the entire "malpractice problem" yet to be resolved by the Legislature and the Judiciary, MSMS does not have the luxury of being able to "wait and see." *The time is now, and this program is for now.*

Let us look briefly at the proposed MSMS Self-Insurance Program, and consider the conclusions reached by the Task Force.

1. **Company Form** — This area provided the Task Force with one of its most difficult decisions. At the March meeting of The Council and the information session with the House of Delegates, we suggested that a nonassessable mutual insurance company domiciled in the state of Michigan seemed to be the preferred form of company, compared to the stock, reciprocal, and mutual types. Since that time, this decision has been reassessed and reinforced at length. Legal, actuarial, tax, and Insurance Bureau counsel have all confirmed our original conclusion — that, given the circumstances of professional liability insurance in Michigan today, and considering the elements of tax liability, physician acceptance, timing, and lack of expectation of profit, a *mutual type of company* is preferable.

2. **Policy Form** — *Policy type:* Policies to be issued by the proposed MSMS company will be on an "occurrence" rather than on a "claims-made" basis. While the St. Paul Company has now switched to a "claims-made" basis for its insured outside of Michigan, the "occurrence" type of policy has no greater ultimate liability. Additionally, the "occurrence" type has long been the form used to cover physicians in Michigan and the Bureau of Insurance has indicated a greater acceptability for this type of professional liability insurance.

Limits of liability: Many physicians and some insurance companies have indicated a strong desire to return to the low limits of liability coverage that prevailed in Michigan 10-15 years ago—$10,000/$30,000 or at most $50,000/$150,000. Other physicians have expressed concern that the limits should be at the level of a million dollars or more because of the large settlements which have been made in the past decade. The Task Force has chosen the middle ground. In part because the most meaningful data in this study has been based on the $100,000/$300,000 limits, and in part because we feel it unrealistic to think that there will not be settlements beyond the $10,000/$30,000 range, the Task Force suggests a *limit of liability of $100,000 per occurrence and $300,000 per aggregate.* At the same time, it is both possible and probable that a smaller policy could be issued by the company if the demand was present.

3. **Rate Structure** — In view of the recent marked increase in professional liability insurance rates and the vulnerability of any future projections based on today's conditions, decisions on rate structure are risky at best. All available raw data from insurance companies providing professional liability coverage both in and out of Michigan over the past twenty years have been gathered and analyzed. All available input has been utilized in the making of responsible assumptions relating to total ongoing potential liability. Every attempt has been made, based on the information accumulated, to chart the course of past and future frequency and severity of claims. Precise predictability of future liability is, of course, impossible at this point in time by any rate structuring method.

As a point of comparison of the problem now facing us, in 1953 there was a nationwide average of 3.8 claims per 100 doctors per year, and an average cost per claim of about $1,500; in 1973, these figures had climbed to 9.1 claims per 100 doctors, and an average cost per claim of about $26,000. Projecting these figures to 1978, the frequency of claims will be 12 per 100 doctors and the average cost will be between $31,000 and $46,000 (the lower figure is based on a continuation of experience since 1969; the higher figure is based on a continuation of experience since 1953). The proposed rate structure is based on these figures and an administrative and office expense constant of 6% of premiums.

The proposed premiums are based upon the writing of 3,000 policies in the first twelve months of operation (approximately 2,500 from those previously insured for whom professional liability coverage is now unavailable, and 500 new physicians entering practice in Michigan), and an additional 900 policies per year thereafter. A "mix" of insureds is initially anticipated of approximately 30% class I and II and 70% class III, IV and V.

The proposed premium is 85% of the base rate as published by the Insurance Service Office (ISO) for $100,000/$300,000 coverage. Current ISO rates are as follows: Class I, $1,477; Class II, $2,648; Class III, $4,501; Classes IV and V, $6,001-$12,002, depending upon the type of surgical specialty (Appendix A).

Further exploration is being undertaken to make special provisions in the rate structure for physicians in special circumstances: those just out of residency and new to practice; those who are nearing retirement and have diminished their practice; those working part-time, locum tenens, etc. The actual rate structure for these various categories of physicians will be unavailable for another 2-3 weeks, but is expected to be substantially lower than the previously mentioned base rate.

4. **Capitalization Requirements** — The State of Michigan Bureau of Insurance has set a capitalization requirement of our proposed company of five million dollars. This capitalization requirement provides the required "surplus" of the company, and is exclusive of the premium dollars collected. Actuarial projections suggest that a surplus of ten million dollars will be required by 1979 to comply with the general rule that premium income should be 2-3 times the surplus.

The Task Force has looked extensively into the various means of raising the five million dollars necessary to finance the required capitalization. An "assessment" of the MSMS membership, while deductible to the individual physician, would be paid to the state society and could possibly result in loss of MSMS non-profit tax status were this "assessment" to be turned over to the insurance company as capitalization revenue. Consultants indicate that an advance tax ruling by the IRS would certainly be mandatory, would take considerable time, and would possibly receive either an unfavorable IRS response or none at all.

The possibility of bank loans to provide some or all of the required capital has also been investigated. Needless to say, the banking industry is not overjoyed at the prospect of loaning this kind of money to this kind of venture at this particular time of economic (and malpractice) instability.

After careful consideration, a third alternative, that of the "surplus certificate," is offered by the Task Force as a means of providing the necessary capital for this mutual insurance company. This surplus certificate would be offered to all members of MSMS, whether or not they were policyholders of the MSMS insurance company. The Certificate would be redeemable, and could pay an amount up to 7% per annum. Although the interest due would be set aside by the company, no interest would be paid to the certificate holder for the first two or three years of the company's existence; if the surplus becomes sufficient at a later point in time (probably 10 years), the surplus certificate is redeemable to the holder. It is anticipated that these *"surplus certificates"* would be issued at a *price of $800-$900* per physician.

5. Organization of the Company (Appendix B) — *Board of Directors and Officers.* The proposed company would be owned and controlled, as in any mutual company, by its policyholders who, of necessity, would be physicians. The Bureau of Insurance has indicated that the original incorporators would be physician members of MSMS, selected by MSMS, and numbering at least twenty (20). These original incorporators would then select from their group a Board of Directors of nine (9) to eleven (11) individuals who would serve for three years. After the initial period, future Boards of Directors would be elected by the policyholders at large from their own group. The Board of Directors would elect its own Officers from its group. The Board of Directors would assume total responsibility of the company and would select a management firm to handle the day-to-day operation of the company.

Management Firm and Outside Services. The management firm would be responsible for provision of services including but not limited to claims, underwriting, policy issuance, supportive services, and outside consultants and services as required (Appendix C). The claims function (Appendix D) and underwriting function (Appendix E) are outlined in more detail elsewhere. A statistical and information division would be established under direct control of the President and Board of Directors and would provide all internal accounting, bookkeeping, tax, and similar information (Appendix F). Outside accounting, legal, and investment consultation would be under the direct control of the President and the Board of Directors.

This then, is the nature of the proposed MSMS self-insurance company. Obviously, the ultimate success or failure of this company depends on many other factors — the degree of participation of MSMS members and the associated marketing effort, and the general improvement in the "environment" of the whole malpractice problem. Despite all these potential hazards, the Task Force suggests that an all-out effort be made to establish an MSMS insurance company as soon as possible. Conversations with the Bureau of Insurance indicate that the necessary incorporation papers, bylaws, capitalization effort, and initiation of underwriting can all be realistically underway by no later than July of this year, if approval for the formation of this company is forthcoming from the House of Delegates at its May, 1975 meeting.

RECOMMENDATIONS:

1. That the MSMS Council receive this Task Force report for information and refer it to the MSMS House of Delegates at its May, 1975 meeting.
2. That the MSMS House of Delegates approve the establishment of a Michigan State Medical Society Insurance Facility, with incorporation, organization, capitalization and marketing efforts to begin as soon as appropriate clearance is granted by the Bureau of Insurance of the State of Michigan. This company would include the following features:
   a. Incorporation as a nonassessable mutual insurance company, managed by a Board of Directors composed of MSMS members selected by the incorporating group, and subsequently elected by its policyholders;
   b. Issuance of professional liability policies on an "occurrence" basis, with liability limits of $100,000/$300,000;
   c. An initial rate structure of 85% of current ISO rates, with special provisions for certain groups of individuals in special categories;
   d. Issuance of redeemable interest-bearing "surplus certificates" which would pay up to 7% per annum to MSMS members for the purpose of initial required capitalization;
   e. Organization of the company as to management, claim, underwriting, and consultant functions as suggested in the appendices to this report.

The Task Force Chairman would like to express his deep appreciation and thanks to all those individuals and groups who have made this report possible.

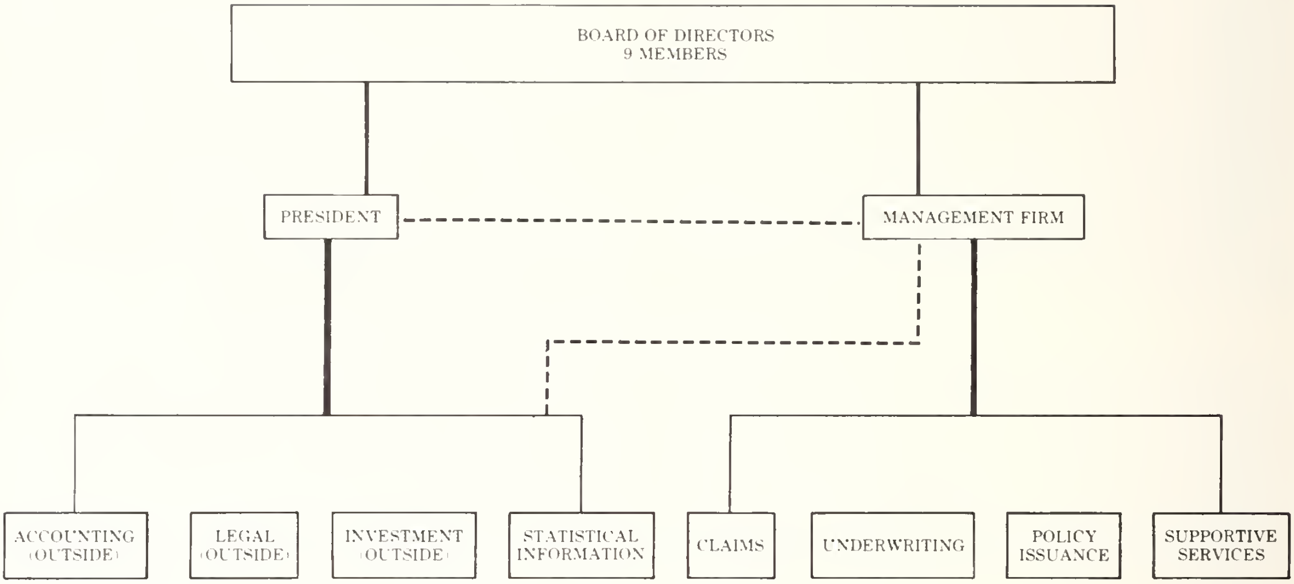
APPENDIX A
PHYSICIANS, SURGEONS — INSURANCE SERVICE OFFICE RATES AS OF 1-1-75

Physicians	100/300 Annual Premium
80111 Class 1	$ 1477
80112 Class 2	2648
Surgeons	
Class 3	
80113 G.P. With major surgery	$ 4501
80114 Ophthalmologists	4501
80115 Proctologists	4501
Class 4	
80141 Cardiac Surgeon	$ 7501
80142 Otolaryngologists	7501
80143 Surgeons-General	7501
80144 Thoracic Surgeon	12002
80145 Urologists	6001
80146 Vascular Surgeon	12002
Class 5	
80151 Anesthesiologists	$ 7501
80152 Neurosurgeons	12002
80153 OB-Gyn	9001
80154 Orthopedists	12002
80155 Otolaryngologists	7501
80156 Plastic Surgeons	9001

APPENDIX B

MICHIGAN STATE MEDICAL SOCIETY — INSURANCE FACILITY

ORGANIZATIONAL CHART



APPENDIX C

MANAGEMENT FUNCTION

All personnel employed by Management Firm

The management firm would provide all ongoing services including but not limited to:

1. Underwriting review;
2. Claims handling and record keeping;
3. Policy issuance;
4. Policy changes;
5. Arrange for all reports, permits and licenses required by regulatory authorities;
6. Provide input and monitor changes in legal, legislative or insurance climate circumstances which would require changes in policy form or internal systems;
7. Managing of reinsurance;
8. Provide statistical input for payment of taxes and general or specific information as required;
9. Employ such consultants and outside services as required.

APPENDIX D

CLAIMS FUNCTION

The claims responsibility shall fall under the direct supervision of the management firm. A claims manager would be delegated the following responsibilities:

a. Receive, log and acknowledge all reports of claims or possible incidents which may lead to claims.

b. Set up files and maintain up-to-date records of all proceedings on behalf of the insured;

c. Arrange for such investigation and information as shall be propitious;

d. Appoint attorney as necessary to represent carrier and insured;

e. Produce claims statistical data in the form of cumulative reports of paid and outstanding liabilities on a quarterly or monthly basis;

f. Establish reserves and evaluate potential liability of each claim;

g. Create and maintain claims review boards on county or regional basis. The claims review board would consist of physicians within the locale of claims to be reviewed, the attorney appointed to represent the insured, a State Society staff member and claims manager. The purpose of such review board would be to review facts of the claim, provide input beneficial to satisfactory settlement, develop claim strategy, and review adequacy of reserve.

APPENDIX E

UNDERWRITING FUNCTION

Initially, all applicants will be reviewed to classify and rate according to exposure territory and specialty. Each application will review the basic educational and experience qualifications of the physician. Past claims history will be reviewed in some detail to ascertain if applicant falls within the scope of what can be considered normal limitations.

It will be the policy of the management firm to establish a physician review board of no less than five members to individually review all such applicants as an initial screening may deem to be necessary. Such board would have the prerogative to:

a. include coverage at standard rates;

b. recommend coverage at rates in excess of standard;

c. deny coverage to unacceptable risks and exposure of the insurance company;

d. serve as appeal review board for change in status or in the event rates are debited or coverage denied.

APPENDIX F

STATISTICAL AND INFORMATION DIVISION

All personnel employed by the Insurance Facility

This division under direct control of the President and Board of Directors would provide all internal accounting, bookkeeping, management of accounts receivable and payable, issuance of checks, paying of taxes, etc.

Additionally, this division could provide for:

a. assembling and producing of any and all information as may be requested by the Board, State or local society, Federal, State or regulatory body;

b. produce and disseminate such information and educational materials as may be of specific or general interest.

PROPOSED PHYSICIAN CONTROLLED INSURANCE CARRIER

Questions and Answers
May, 1975

Q. What is the issue?

A. Approximately 3000 doctors without insurance coverage after June, 1975

Q. What are the alternatives?

A. (1) State-sponsored program — Demlow Proposal

(2) MSMS Self-Insurance Facility

Q. Are any insurance companies now writing coverage for physicians?

A. MSMS Consultants have surveyed nearly 90 liability insurance carriers who are unwilling to entertain the writing of coverage for Michigan doctors on any innovative basis. Currently, Lloyds of London may be the only market, at elevated rates, on a claims made policy form, and then individually underwritten.

Q. What are the principal differences between the State Program and MSMS Self-Insurance Facility?

	State	MSMS
Funding	Assessment by State of all licensed doctors	Purchase of redeemable interest bearing surplus certificates
Policy Issuance and Servicing	Approved insurance carrier designated by State	Mutual insurance company management firm
Rates	To be determined by appointed Board	85% of current published Insurance Bureau rates
Are policies assessable at a later date?	Yes, against *all* licensed physicians	No
If assessable, is there a limit in amount of assessment or number of times assessed?	No	Not applicable
What is degree of control vested with medical profession?	Problematical, if any	Absolute, except in conflict with State or Regulatory Agencies
Can other health care facilities be insured under program?	Yes, at the discretion of Insurance Commissioner	At the discretion of Medical Facility Board of Directors
What form of coverage is contemplated?	To be determined by appointed board	Occurrence basis — as presently available
What limits of coverage are available?	To be determined	$100,000 per person $300,000 annual aggregate Additional limits to be determined
Under whose direction would program be carried on?	Ongoing business transactions by policy of appointed board with approval of Insurance Commissioner	Ongoing business by management firm under direction of Physician Board

Q. What is the form of Insurance Facility?

A. Non-assessable Mutual Insurance Company, owned by physicians and controlled by physicians.

Q. Why a *Mutual* insurance company?

A. Four basic forms exist —

(a) Stock company
(b) Mutual company
(c) Reciprocal
(d) Trust

Stock company was rejected because of time consuming and costly process of qualifying under Securities and Exchange Commission laws. Rejected also because of for-profit motive and unfavorable tax treatment in years producing a profit. Assuming an underwriting profit, a mutual carrier would pay less than a stock carrier.

A *Mutual* insurance company can defer taxation of a portion of its underwriting income, and in addition, a portion of the underwriting income may escape taxation permanently.

A *Reciprocal* has similar attributes of a mutual, except that the operations of a Reciprocal are vested in an attorney-in-fact rather than the mutual stockholders or its board of directors. Reciprocals are not desirable in Michigan because of lack of regulatory law. Only one reciprocal exists in Michigan at present. A reciprocal may offer additional tax advantages over a mutual. However, an additional tax cost could result to the insured physician.

A *Trust* company was discarded as being inapplicable in the State of Michigan, and also is subject to very unfavorable tax treatment by IRS.

No State Society is currently organizing a form of self-insurance other than a mutual or reciprocal carrier.

Q. Why a *non-assessable Mutual*?

A. Future liabilities would be better dealt with in the form of rate adjustments in subsequent years. Assessments in retrospect do not allow for annual cost determination which must be built into physicians' charges. The insured physician has no contingent liability in excess of the premium paid to the insurance company. Under the State plan and an assessable policy, the insured physician has no assurance that the premiums paid are final. Additional payments may be required.

Q. Why use current rates?

A. Pure loss history and subsequent development of anticipated frequency of claim or ultimate cost of claim is unavailable in Michigan. This information is vital to projecting of rates.

Information made available from the Insurance Department, Shelby Mutual Insurance Company and the Insurance Rate Making Body (ISO) is inconclusive for Michigan. Illustrative studies from other parts of the country were used to determine the norms, and Michigan information was correlated against these norms. These figures were used to project ultimate probable liabilities. 85% of current rates would appear adequate to meet these projected liabilities.

Q. What are current rates at limits of $100,000/300,000 by class of doctor?

A. See rate sheet, Appendix A, of Task-force Report.

Q. How much capital is needed?

A. According to Michigan Insurance Bureau, initial capitalization should be $5,000,000.

Q. Will this require all doctors who are MSMS members to participate in funding?

A. Yes, while contributions to capital must be voluntary, no policy can be issued to a member who has not fulfilled this financial obligation.

Q. Who will run this company?

A. A board of directors consisting of nine to eleven physician members.

Q. How will company carry on day-to-day operations?

A. By a professional investment manager reporting to the board. Investments will be limited to conservative investments and must be according to the requirements of the Michigan Insurance Code.

Q. How will investment of funds be handled?

A. By a professional investment company reporting to the board. Investments are limited to conservative investment practices, and all surplus must be held and not loaned by requirement of the Michigan Insurance Bureau.

Q. Who will perform audit functions?

A. A nationally recognized CPA firm will be retained by the board for this purpose.

Q. Will doctors have a say in underwriting?

A. Yes. Underwriting review boards by physicians is a cornerstone to effective underwriting control.

Q. Will doctors be involved in claims handling and reserves?

A. Claims handling and setting of reserves will be the responsiblity of the management firm. A physician review board is a necessary tool to establishing defense and strategy as well as reviewing adequacy of reserves.

Q. Will there be a territorial differential in rating structures?

A. Yes.

Q. Will physicians with limited practice or faculty members be able to purchase insurance at reduced rates?

A. Yes.

Q. Will coverage extend to include participation on medical staff committees?

A. Yes.

Q. May policy be extended to cover Professional Corporations, Partnerships or Associations?

A. Yes, at reduced cost over present charges by all companies — if all members are insured.

Q. Will policy be able to be extended to insure my employees?

A. Yes, at current bureau published rates.

Q. Can this vehicle survive without legislative help?

A. No. It is the intent that all reasonable and prudent steps are taken to safeguard viability of this program for an ongoing vehicle. However, at ever increasing frequency and cost of claims, no insurance carrier or self-insurance vehicle can survive without legislative help. This legislative help must limit or reduce liabilities, all associated costs, within a reasonable time limit, and do so in an effective manner.

REFERENCE COMMITTEE A, Harold F. Falls, MD, Chairman, recommended the establishment of a physician-owned and operated mutual insurance company by MSMS.

THE HOUSE amended and approved the report of the reference committee as follows:

1. **That the MSMS House of Delegates approve the establishment of a MSMS Insurance Facility, with incorporation, organization, capitalization and marketing efforts to begin as soon as appropriate clearance is granted by the Bureau of Insurance of the State of Michigan. This company would include the following features:**
    - **a. Incorporation as a non-assessable mutual insurance company, managed by a Board of Directors composed of MSMS members selected by the incorporating group and subsequently elected by its policyholders;**
    - **b. Issuance of professional liability policies on an "occurrence" basis, with liability limits of $100,000/$300,000;**
    - **c. An initial rate structure of 85% of current ISO rates, with special provisions for certain groups of individuals in special categories;**
    - **d. Issuance of redeemable interest-bearing "surplus certificates" at a price of $1,000, or multiple thereof, to MSMS members for the purpose of initial required capitalization;**
    - **e. Organization of the company as to management, claim, underwriting and consultant functions as suggested in the appendices to this report; and**
    - **f. No policies should be issued by the company until The Council and its Task Force are satisfied that the professional liability insurance climate has been appreciably improved by action of the Legislature.**

17. Report of Council Activities, Robert M. Leitch, MD

This report highlights The Council's work during the past year in the ongoing activities of the Michigan State Medical Society. Detailed reports are not necessary since minutes of The Council are mailed regularly to delegates and component medical society officers. News items regarding Council activities also appear in *Michigan Medicine* and *Medigram*. Delegates or component society officers who have questions about any items which follow are urged to contact MSMS Councilors or staff regarding them.

MSMS MEMBERSHIP — Membership in MSMS on December 31, 1974, totalled 8,797 — an all-time high. Following are membership figures for the past few years:

Year	June 30	December 31
1935	3410	3543
1945	4425	4686
1955	5503	6109
1960	6660	6715
1965	7247	7563
1970	7643	8062
1971	7645	8101
1972	7741	8168
1973	7856	8378
1974	8348	8797

FINANCES — Following is a balance sheet from the official MSMS audit — December 1, 1974, which gives the financial status of MSMS. Pertinent financial information in detail has been given to the Ways and Means Committee by the Finance Committee.

Although unexpected expenses and costs have occurred because of the Professional Liability problem, funds have been provided without placing the budget in imbalance.

MICHIGAN STATE MEDICAL SOCIETY
STATEMENT OF FINANCIAL CONDITION
November 30, 1974

ASSETS

CURRENT ASSETS

Michigan National Bank, Lansing, Michigan commercial account		$ 2,494.41	
Office cash		200.00	
Michigan National Bank, Lansing, Michigan, P.S.R.O. account	$ 25,118.00		
Less advance payment from H.E.W.	$ 25,118.00	-0-	$ 2,694.41
Due from Operational Fund (A below)			384,881.80
Accounts receivable:			
Advertising, reprints, etc.		14,042.42	
Due from employees — retirement plan		2,832.20	
Employee travel advances		3,500.00	
Due from employees		102.16	20,467.78
Accounts receivable — P.S.R.O.:			
Expenses billed to H.E.W. through October, 1974		4,655.43	
Excess expenses over amounts billed H.E.W. through November, 1974		2,051.63	6,707.06

Prepaid purchase of paintings (Note 1)		1,300.52
Prepaid expenses		15,244.88
TOTAL CURRENT ASSETS		431,305.45
PROPERTY AND EQUIPMENT (Schedule 11)		
Land and building	684,900.69	
Furniture and equipment	151,987.51	
	836,888.20	
Less: Depreciation allowance	178,732.63	658,155.57
SOCIETY FUNDED INVESTMENTS		
Capital Reserve Fund:		
Manufacturer's National Bank — principal and income cash	1,550.41	
Investments (Schedule 12) (Market value $279,828.00)	390,376.59	391,927.00
Capital Protection Fund:		
Manufacturer's National Bank — principal and income cash	4,713.60	
Investments (Schedule 13) (Market value $196,328.00)	356,559.50	361,273.10
OPERATIONAL FUND		
Manufacturer's National Bank — principal and income cash	881.80	
Investments (Schedule 14) (Market value $384,000.00)	384,000.00	
TOTAL	384,881.80	
Less: Amount due to General Society (A above)	384,881.80	-0-
TOTAL ASSETS		$1,842,661.12

Note 1: The Society is contingently liable to the Michigan National Bank on a lease for decorative paintings with Mutual Leasing Company, in an amount of $1,940.09. The lease is payable at $105.14 per month, and expires June 10, 1976.

LIABILITIES

CURRENT LIABILITIES		
Mortgage payable — Michigan National Bank (current portion)		$ 52,356.00
Payroll taxes due		3,851.11
Refundable County Society dues		125.00
Unpaid invoices		14,264.15
TOTAL CURRENT LIABILITIES		70,596.26
LONG TERM DEBT — headquarters building:		
Mortgage payable — Michigan National Bank	$571,860.87	
Less current portion (December, 1974 through November, 1975)	52,356.00	519,504.87
TOTAL LIABILITIES		590,101.13

SOCIETY EQUITIES

GENERAL SOCIETY EQUITY			
Balance — December 1, 1973	$365,630.25		
Net gain (loss) for period (Exhibit B)	133,729.64		
Balance — November 30, 1974		499,359.89	
CAPITAL RESERVE FUND EQUITY			
Balance — December 1,1973	476,710.17		
Net decrease for period (Exhibit B)	(84,783.17)		
Balance — November 30, 1974		391,927.00	
CAPITAL PROTECTION FUND EQUITY			
Balance — December 1, 1973	364,376.53		
Net decrease for period (Exhibit B)	(3,103.43)		
Balance — November 30, 1974		$361,273.10	
TOTAL EQUITIES			1,252,559.99
TOTAL LIABILITIES AND EQUITIES			$1,842,661.12

MSMS PRIORITIES — In November 1974 The Council approved top priority goals for 1975. These were 1) to continue efforts to resolve the malpractice situation, and 2) to begin an MSMS continuing medical education program. Other efforts for 1975 were to influence political and regulatory decisions of government, to investigate and develop new member benefit programs, to increase membership, to increase public information efforts about selected MSMS concerns and to improve the delivery of quality medical care in Michigan. This is the second year that The Council has established priority goals.

A large portion of the Society's time and effort has gone into efforts to reach a solution to the professional liability insurance problem, and a later section of this report will be devoted to that subject. However, there have been ongoing efforts regarding the other priorities which will be reported briefly as well.

CONTINUING EDUCATION — The Council commends to you the report of the Commission on Continuing Medical Education which follows this report. MSMS has received from the AMA Council on Medical Education a one-year provisional approval to accredit continuing medical education programs in Michigan.

The Commission's first survey was of Sparrow Hospital in Lansing on April 30. Additional surveys are being scheduled for the near future.

The Council congratulates Chairman Louis Heidman, MD, and the members of the Commission for their hard work and spendid accomplishments during the past year.

LEGISLATION — In addition to much professional liability legislation in 1975, which will be discussed later in this report, organized medicine faced two legislative challenges in 1974: A thrust by chiropractic to assume unwarranted privileges, and pharmacists' drive to obtain selection of drugs (generic substitution). In the former, MSMS successfully prevented consideration of the chiropractic bill. In the latter, generic substitution law was passed which, in the attorney general's opinion, prevents substitution solely upon the pharmacist's decision. The MSMS proposal that a physician may designate "DAW" (dispense as written) on a prescription as a ban on any substitution has been picked up by several other states in their generic substitution legislation. In other action, funds were appropriated to stimulate family practice residency programs in Michigan; special certificate-of-need legislation for osteopathic hospitals did not pass; the appropriations to Medicaid physician fees and to medical schools in the state were increased to meet demand.

Several bills affecting medical services through workmen's compensation have been introduced. A "determination of death" bill has been introduced and enacted by the House (Senate action pends).

MEDICAID — Throughout the year, The Council received regular reports from the Medicaid Liaison Committee on its activities. A major concern was the adverse publicity generated by a few providers who had billed the Medicaid program for excess amounts. This caused a cloud of suspicion to fall on all physicians. The Medicaid Liaison Committee reached an agreement with the Michigan Department of Social Services to review suspected cases of provider abuse on a periodic basis prior to the release of information to the press. The Committee has analyzed the audit system of suspected cases and supports the Department's effort to identify those few providers who threaten the integrity of all providers and the Medicaid program.

The Committee also reported to The Council the successful completion of a reimbursement system for neonatal intensive care units, the deletion of codes for unqualified practitioners, and revisions in the procedure manual to clarify Medicaid policy; also it has outlined the issues currently under consideration. The Annual Report of the Committee contains more specific information.

The Council appreciates the work being done by the Medical Liason Committee and supports the ongoing relationship established with the Department of Social Services under the chairmanship of James D. Fryfogle, MD, and, beginning in April, 1975, David Siegel, MD.

MEMBER SERVICES — The Council is giving serious consideration to the installation of an IBM System 32 computer. The availability of this equipment in-house will make it possible for MSMS to provide better and faster service to component societies. All dues notices, collections and processing can be handled at MSMS headquarters at a savings to all component societies. MSMS will be able to provide mailing labels, membership reports, meeting registrations, and other services. In addition, MSMS accounting functions will be put on the computer to provide current, up-to-date information and reports for management.

The computer will also be utilized by the Bureau of Economic Information for its many stidies and surveys.

It is anticipated that the computer will be operational about November 1, 1975 in time for the processing of 1976 dues notices.

PROFESSIONAL STANDARDS REVIEW ORGANIZATION — The Ad Hoc Committee on Peer Review Systems continues to function as a coordinating mechanism for local physician groups involved in planning activities for PSROs. Committee members include leaders from all but one of the ten PSRO designated areas.

The Michigan PSRO Support Center began operation on July 1, 1974 and is fulfilling the Society's goal of rendering vital assistance to physicians throughout Michigan as they strive to come to terms with the PSRO law. The Center, upon request has (1) conducted educational and informational programs at numerous meetings of county medical societies, hospital medical staffs, and regional physician groups, and (2) given extensive technical help to organizing groups in developing contract proposals and articles of incorporations.

Organizing groups in PSRO Areas I (Upper Peninsula) and V (Genesee, Shiawassee and Lapeer counties) have contracted with HEW to plan PSROs for their respective areas. Both groups are now on the verge of being designated conditional PSROs by HEW.

Organizing groups composed primarily of county medical society leaders have come into existence in PSRO Areas III (Grand Rapids, Muskegon area), IV (Saginaw, Bay City, Port Huron area), VI (Lansing area), VII (Jackson, Ann Arbor area), IX (Oakland and Macomb Counties), and X (Kalamazoo, Battle Creek, St. Joseph area). The groups in Areas III, VI, VII, and X have requested planning funds from HEW. The Area IV group will file an application shortly. The steering committee in Area IX is developing a draft proposal. Last spring, two groups from Area VIII (Wayne County) applied for planning funds. A single proposal from Area VIII is presently being acted on at HEW.

The Council believes that the continuation of the Support Center is vital to Michigan physicians. The Center operates under the unalterable principle that assistance is provided only at the request of physicians. It does not unilaterally attempt to initiate PSROs, but rather helps physicians who are responding to the PSRO law to protect their interests.

COMMUNICATIONS — Most of the communications efforts within the profession and to the public have dealt this year with the professional liability situation. Issuance of the new publication "Malpractice Update" helped get special information fast to about 800 leaders of the medical profession in Michigan.

In addition, the department constantly sought new ways to further improve MSMS communications with components, specialty societies, members, medical students, etc.

New activities this year included (1) a series of monthly "Ask the Doctor" programs over Detroit TV station WTVS, Channel 56; (2) daily news announcements over the new Physicians Radio Network based in Detroit for Michigan; (3) promotion of the "Ounce of Prevention" television programs developed by the American Academy of Pediatrics by Frederick Margolis, MD, of Kalamazoo; (4) a series of speeches by MSMS leaders to all nine regional meetings of the Michigan Farm Bureau Women; and (5) many appearances by MSMS President Masters and other before the Michigan Hospital Association, Michigan Pharmaceutical Association, Wayne State University freshman medical students, and other groups.

NEGOTIATING COMMITTEE WITH THIRD PARTY CARRIERS — The Negotiating Committee with Third Party Carriers has met frequently over the past year with representatives from the Michigan Department of Social Services (Medicaid), Blue Shield, Medicare, and the Health Insurance Association of America to discuss the arduous tasks of creating a uniform claim form, determining which coding system should be recommended for use by all physicians and third party payors in Michigan, and seeking alternatives to such unfair reimbursement practices as the regionalization of fees and use of outdated physician profiles. Also under discussion have been the problems of peer (fee) review, specialist versus the generalist, the Provider Agreement Clause, "over-the-screen" letters, plus other concerns of MSMS members. The Council provided all necessary staff and budget required by the Committee.

The Committee has submitted interim reports to The Council and has received its advice and counsel as mandated by the House of Delegates resolution establishing the Committee.

The Council reviewed the final report of the Negotiating Committee which is being presented separately to the House.

The Council commends the Committee for its efforts and accomplishments.

BUREAU OF ECONOMIC INFORMATION — The Bureau of Economic Information has been very involved with the professional liability crisis over the past year. Aside from giving presentations at various meetings and programs around the state, the Bureau has conducted two surveys on malpractice and has served as main staff support for the Task Force to Consider MSMS Self-Insured Professional Liability Insurance Program.

On other socio-economic matters, the Bureau has continued to present timely articles in its *Research Bulletin.* Also, work has been done on the Michigan Health Manpower Study and on a study concerning intern and resident placements in Michigan. Plans are being developed to conduct a physician fee survey again this summer so as to add to the existing data bank.

REORGANIZATION OF COMMITTEE STRUCTURE — Work has been going on to develop the MSMS divisions and committee as recommended by the Planning and Priorities Committee last spring. However, because many parts of the structure are as yet incomplete and much work still needs to be done, the Constitution and Bylaws Committee has been asked to delay revision of the Bylaws to incorporate the new system. This will give MSMS another year to work with the system on a pilot basis before a final decision is made.

PROFESSIONAL LIABILITY — One year ago this month, the House of Delegates and The Council foresaw an impending problem with cost and availability of professional liability insurance. This was not a sudden realization. MSMS had attempted corrective legislative action for several years; but there was virtually no support then from the public or Legislature.

So by House of Delegates resolution in May 1974 an MSMS committee was created to proceed with "deliberate speed" to rethink any and all possible solutions. It seemed everyone had a solution and all deserved exploration.

The Committee had even less time for study than we thought, for the situation deteriorated rapidly. In July, The Council instructed the Committee to become an action committee to quickly develop specific recommendations and seek an MSMS state-wide sponsored plan of professional liability insurance.

Under the chairmanship of John W. Grigg, MD, the Committee responded admirably. The Committee recommended a basic legislative program on October 23. The Council approved, and MSMS then had a blueprint for action. Efforts to seek a sponsored plan continued.

During this same period the hardest-hit physicians also were reacting and pressing for faster solutions — via the Physicians Crisis Committee.

The Council and the PCC, through a liaison committee, agreed in December on four basic principles to alleviate the professional liability problem.

During that time period, 6 to 8 months ago, the insurance problem in Michigan was becoming acute. MSMS worked hard to obtain a sponsored plan for the whole state, if a carrier could be found. Despite the fact that we retained the finest experts, no insurance company would consider expanding its market. Instead, all were reducing their exposure and, in some cases, withdrawing entirely from the market.

At roughly the same time, concurrent efforts were going on — liaison with the Physicians Crisis Committee to assure coordination of effort, liaison with the Michigan Hospital Association to explore mutual aid, liaison with the State Bar to explore possible areas of agreement.

(The liaison with the Bar faltered on the issue of arbitration. The Bar since 1969 had favored arbitration in malpractice cases, but strongly opposed, on constitutional grounds, bind and contractual arbitration.) So those talks were broken off.

Since January, MSMS has pursued a three-pronged approach:

1) Seek remedial legislation in the Legislature (its session began in January).
2) Investigate the feasibility of establishing our own physician owned professional liability insurance company.
3) Seek coverage for any member facing the loss of professional liability insurance, with the aid of our insurance consultant, the State Insurance Bureau, and the hospitals.

MSMS sought, in two general visitations by officers, the aid of Governor Milliken. This resulted in his appointment of a Special Consultant on Professional Liability, Michael J. Dively, and an instruction to Insurance Commissioner Daniel Demlow to make the solution to this problem his highest priority. Mr. Dively subsequently gave the Governor a document containing 31 recommendations.

To redirect MSMS efforts, The Council reviewed the many committees working on aspects of the problem. Some committees had completed their work and other areas of work were opening up which required new task forces or committees. So the entire committee approach was restructured into a smaller cohesive grouping with very specific responsibilities. Created were:

1) A new Select Committee on Professional Liability — John J. Coury, MD, Chairman, whose assignment it was to overview all professional liability activities (state, MSMS, county and national) and report directly to The Council. This committee serves as The Council's principal advisor in this matter.
2) Task Force to Consider Self-Insured Professional Liability Insurance Program — Frank B. Walker, II, MD, Chairman — whose job it was, and is, to explore the feasibility of an MSMS company, with the aid of necessary consultants and actuaries.
3) Committee to Prepare for Implementation of Arbitration — Rhoda Powsner, MD, Chairman — whose duty is to develop the necesssary forms and instructive guidelines for use by physicians, hospitals, and component societies when an arbitration bill is adopted by the Legislature.

The Liaison Committee with the PCC, already mentioned above, was continued.

Naturally, our Committee on State Legislation and Regulations — Thomas R. Berglund, MD, Chairman — is devoting much of its time to reviewing the more than 54 bills that have been introduced, recommending MSMS positions on each, and supervising our extensive lobbying efforts. That committee, with the advice of MSMS Legal Counsel, was instrumental in drafting bills which were introduced to implement MSMS principles.

The Liaison Committee with the Michigan Medical Practice Board — Robert M. Stow, MD, Chairman — is prepared to deal with professional liability concerns that relate to the Board, such as adequate budget and funding, Board rules and regulations, etc.

Professional liability insurance firms insist that the climate must be changed so that an uninsurable situation can be made insurable again and so insurance can be offered again to all doctors at more reasonable rates. MSMS-supported bills are designed to improve this climate by reducing nuisance suits, providing for binding-contractual arbitration, and tightening up the statute of limitations, etc.

MSMS has other approaches also under consideration. One of those is a modified Indiana patient compensation bill which recently became law. The effect of that single omnibus bill will not be known for some time, but MSMS has had it under study for some time, and with modification for the pecularities of the Michigan power structure it may have some relevance to our problems. We will await the results of our present legislative package, however.

It is obvious that most of this report on professional liability is not news to members of the House of Delegates. It is intended to attempt to put the year in perspective for the record. Our communications with delegates and with every member have been extensive, both in personal appearances and in written reports.

All of this activity on behalf of MSMS costs money, obviously. Fortunately, we have been able to cover these unexpected costs:

- The feasibility study of an MSMS professional liability company.
- The distribution of petitions and the formation of a citizens campaign to obtain patient signatures supporting our legislative package.
- A news media advertising campaign in which MSMS pays for production costs of a proposed ad for components to run in their local papers.
- An MSMS ad campaign in which we will assume responsibility for ads in the statewide papers — the Detroit News and the Free Press.
- The Professional liability pamphlet for doctors reception rooms is self-sustaining. You should know that member response has put this pamphlet into a fourth printing (each updated for accuracy) so that now we have almost 500,000 copies in the hands of concerned citizens.

As you know and would expect, we have maintained continuing relationships with AMA, the National Commission on Professional Liability, HEW, members of Congress and others seeking advice, help and knowledge to guide us in the proper direction.

There is no single solution to the complex problem. The Council believes it has acted in the best interest of the entire membership. With your individual assistance, The Council believes it can achieve necessary legislative action. Fragmented efforts can only assure defeat.

We must stand together with public support for the MSMS solutions to this most serious public health crisis.

* * * *

The Council commends the dedication and hard work of each individual Councilor, as well as each member of MSMS committees, the Michigan Delegation to the AMA and staff who have helped The Council meet its heavy responsibilities in the past year. The staff deserves special mention for its response during these times which have special stress and pressures. Once again the staff has exhibited its professionalism and its dedication to carrying out the policies established by the House of Delegates and The Council.

We hope for your continued support during the coming months.

18. Report of Commission on Continuing Medical Education – Louis E. Heideman, MD, Chairman

The Commission on Continuing Medical Education met on February 27, October 8, and November 6, 1974, and January 8, March 5, and April 2 of 1975. A number of scheduled meetings were cancelled because of individual problems and the storm of December 7, 1974. Dr. Rutledge W. Howard of the AMA staff provided consultative services at the October 8 meeting. An application has been submitted to the AMA Council on Education for designation of the Commission as the accrediting body for Michigan with reason to believe this will be approved. As part of the application, an accreditation manual, preaccreditation questionnaire, and site visit report form have been developed. The Commission has been enlarged by the addition of a number of representatives from specialty sources and other organizations with commitments to continuing medical education. The Commission is currently engaged in the development of criteria for objective evaluation of hospital programs and in completing arrangements for initial site visits.

Progress in completing the charges of the House of Delegates is as follows:

(1) "That an appropriate commission of the Michigan State Medical Society be created and empowered to develop a flexible series of minimal continuing medical education standards for physicians practicing in Michigan."

(2) "That such standards be based on a broad approach requiring a set number of credits using facilities and approved programs of hospitals, medical schools; county, state, and national societies; and other current and developing methods of continuing education as determined by the permanent commission."

These were reported to the 1974 meeting of the House of Delegates with the recommendation of adoption of the standards utilized by the AMA in its Physician Recognition Award and most of the state medical societies. This calls for 150 hours of continuing education in a three-year period. Six categories of activity are identified with a minimum requirement of 45 hours of Category I or fully accredited activity and no ceiling on this category. There are ceilings on the other categories, but no floor.

(3) "That the Michigan State Medical Society establish basic principles of approval for all continuing medical education programs in the State of Michigan and also guidelines for reciprocity with accredited programs of other state, regional and national organizations."

In consultation with Dr. Howard of the AMA we have adopted a plan which is modeled after that of the District of Columbia Medical Society and of the AMA. Standards have been set, and we are currently developing criteria. Your Commission recommends the use of a single set of standards, but that some flexibility exist within the criteria. It obviously would be unreasonable to expect the medical staff of a 50-bed hospital to mount the same kind of program as a 2,000-bed medical school affiliated medical center. At the same time we must not be so flexible that accreditation becomes a meaningless rubber stamp process.

One of the AMA standards requires a physician award. We recommend reserving this recognition to the state society based on voluntary application and reporting by the physician rather than allocating this to the sponsors of the program. Documenting can be achieved in a variety of ways. The AMA is currently developing a system of reporting which would have the advantage of facilitating out-of-state program participation and the disadvantage of centralization and loss of some state autonomy. This will require further consideration. Consideration should be given to designation of those physicians who fulfill the continuing education criteria as "Fellows" of the MSMS, utilizing reward as a motivating factor and minimizing force.

A new feature in Michigan is the proposal for a law requiring 25 hours per year of continuing education as part of the package of laws attempting to cope with the professional liability problem. This may precipitate a crisis in the accreditation process. It is of concern to your Committee in that:

(1) It sets a standard lower than has been considered a minimal standard.

(2) We are convinced that a voluntary compliance is more effective — making the requirement compulsory stimulates efforts to beat the system with the game becoming more important than the achievement of any constructive objective.

Your Committee recommends: (1) Acceptance of this report and (2) Endorsement of the program of accreditation.

Committee Reports

19. Annual Summaries of Committees

Advisory to American Association of Medical Assistants, State of Michigan
John J. Coury, MD, Chairman

This has been a banner year for the AAMA, State of Michigan with Betty Lou Willey having been installed as AAMA's national president.

Mrs. Coury and I had the privilege and good fortune of attending Mrs. Betty Lou Willey's inauguration in Denver in September of 1974.

After attending several of their educational seminars, I realized how dedicated and concerned our medical assistants are. The enthusiasm for medicine in their organization is outstanding.

Claire Van Dam is to be commended for the outstanding job that she has done as president of AAMA, State of Michigan.

Jackie Van Deventer continues to do a very commendable job as staff support from MSMS to the medical assistants. Her presence at the national meetings would be a great support to AAMA of Michigan.

I hope we can continue an ongoing campaign to see that all physicians' offices are represented by medical assistants belonging to the state organization. It is also my hope that most doctors would financially support this organization.

A concerned, dedicated and knowledgeable medical assistant is a quality supplement to the practice of medicine, not only for the quality of care that may be delivered by that medical office, but for the compassion for patients and in the prevention of incidents in any setting that may lead toward litigation.

I commend the medical assistants for their ongoing quality programs and their self-education which undoubtedly has a spinoff in better patient care.

Again, I urge active interest and participation by all practicing physicians in the medical assistant's program. The continued active support of MSMS as an organization, and of its members individually, is absolutely necessary for AAMA, State of Michigan to continue its viable and productive activities.

Advisory to Woman's Auxiliary
William J. Jones, MD, Chairman

The Advisory Committee to the Woman's Auxiliary to the Michigan State Medical Society has served from October 10, 1973 to May 7, 1975.

The Bylaws change, which the Michigan State Medical Society recommended, to change the annual meeting from fall to spring, was adopted by the Auxiliary.

At the same time, the Auxiliary also changed its name to the Michigan State Medical Society Auxiliary, to become effective at the close of their 50th Anniversary celebration in 1977.

There have been no formal meetings of the Advisory Committee, but S.A. Yannitelli, MD; F. P. Rhoades, MD; Fleming Barbour, MD; and I have conferred with the Auxiliary when consulted.

The Auxiliary is to be commended for its fine work in International Health, Health Education, Community Service, Legislation, and AMA-ERF.

If the program of the Auxiliary is to continue to flourish, it is essential that the wife of every physician be an active member of the Auxiliary. This can be done most effectively if each member of MSMS encourages his wife to become a member of the Auxiliary.

Aging
Jack F. Sanders, MD, Chairman

The Committee on Aging met on October 31, 1973 and July 17, 1974.

At the request of The Council, the Committee studied the Special Report of the Work Group on MSMS Position on Aging. Following thorough discussion of this report, plus the Committee's concepts of improving the care of the elderly, nine principles were drafted which subsequently were approved by The Council.

The Council also approved the Committee's Special Report on "Improving the Well-Being and Health of the Home-Bound Elderly."

In addition to the above, the Committee monitored federal and state legislation and programs pertaining to the elderly.

Alcohol and Drug Dependency
Richard C. Bates, MD, Chairman

The Committee met three times since its last report.

A meeting was held with members of the Committee on Drug Abuse and Alcoholism of the State Bar of Michigan for an informal discussion of the work, responsibilities, and interest of both Committees. The problems of alcohol and drug addicted physicians and attorneys and many other aspects of the problem were discussed. The MSMS Committee was subsequently invited by the State Bar's Committee to meet for a discussion of HB 4008, the bill to provide for the decriminalization of public intoxication.

The Committee continued its liaison with the Office of Substance Abuse Service of the Michigan Department of Public Health, and approved the concept that adequate funds should be allocated for research in connection with substance abuse in the State of Michigan.

The Committee again expressed concern over the lack of curriculum on substance abuse being taught in medical schools, the lack of the development of expertise within medical school facilities in the fields of narcotic addiction, drug abuse and alcohol abuse, and the absence of courses on addiction and substance abuse (even if only elective) in all three medical and the one osteopathic schools in Michigan.

The House of Delegates referred to the Committee Resolution 74A-32 entitled "Discrimination Against Alcoholics." The resolution called for the development of rehabilitation programs for alcoholism. Since its formation 15 years ago, the Committee has seen the development of rehabilitation programs for alcoholics as one of its primary responsibilities. The Committee has been gratified to see the number of hospital alcoholism units grow from 1 in 1956 to a present level of 31. The Committee will continue to press for more facilities, particularly in Wayne County.

At each meeting, the Committee reviewed legislative matters concerned with drug and alcohol dependency.

Assist Impaired Physicians
H. Richard Henderson, MD, Chairman

This Committee was appointed in the spring of 1974 by The Council to develop an MSMS policy and program for implementing the policy regarding assistance to physicians who were mentally ill and/or drug-addicted (including alcoholics).

The Committee has developed a policy statement which was adopted by The Council and subsequently disseminated to component medical society officers for their information. Component societies are being requested to develop local plans for implementation of the program and lists of community and statewide treatment resources are being compiled.

Implementation of the program will be finalized during the next few months.

Children and Youth
George L. Blum, MD, Chairman

The Committee on Children and Youth met on October 2, 1974 and has scheduled its next meeting for April 23, 1975.

It reviewed the film being used by the Michigan Department of Social Services to publicize the Medicaid screening program for children and made recommendations for improvement of the presentation; requested a study of infant intensive care centers be conducted by the MSMS Bureau of Economic Information; urged that the Special Education Code be amended to make it mandatory that a periodic re-evaluation be made of all children in special education (an examination similar to the initial examination); recommended that the MSMS Government Relations Department take appropriate steps to ensure that children with learning disabilities are covered under the Special Education Bill; discussed guidelines on how to handle the hyperactive child in school; heard a progress report on the Migrant Family Health Care Program in Michigan; recommended acceptance of the American Academy of Pediatrics' physical examination form by children's camps in Michigan; expressed concern about the number of free clinics in Michigan which are unlicensed and manned by untrained personnel; arranged to have newborns included in hospital insurance; and worked toward development of a plant for the screening of newborns for diseases.

Education Liaison
Brock E. Brush, MD, Chairman

This Committee did not meet during the year. In the past, meetings have been initiated by the practicing physicians on the committee and often by the deans of medicine, who serve as advisors to the committee. There has been no request for a meeting, nor any items referred to the committee by the House of Delegates or The Council.

Communication between the medical schools and MSMS has been facilitated during the past two years through the "Deans' Council," an organization of the three medical school deans and the dean of the MSU College of Osteopathic Medicine. There is on-going communication between the executive secretary of the Deans' Council and MSMS officers and staff.

Communication also is expedited by action of the House of Delegates in 1973 to seat the deans of medicine automatically as members of the House, provided they are members of MSMS. The deans of the Wayne State University School of Medicine and Michigan State University College of Human Medicine are MSMS members and therefore eligible to serve as voting members of the House.

Eye Care
Robert T. Blackhurst, MD, Chairman

The Committee on Eye Care met on October 31, 1973, and September 25, 1974.

Subjects considered by the Committee during this period were: The Lion's Club Preschool Vision Screen Program, low vision clinics, ophthalmology referrals for rehabilitation, vision aspects of the Medicaid program, eye care for trainable mentally retarded children, problem of covergency insufficiency, safety glasses for one-eyed amblyops, vision problems in low income areas, mobility of preschool and young children with severe vision impairment, legislation to make school vision screening mandatory, plus other topics pertaining to eye care.

The Committee continues to serve in an advisory capacity to the Vision Section of the Michigan Department of Public Health's Bureau of Maternal and Child Health, the Division of Services to the Blind of the Michigan Department of Social Services, and other organizations and service groups which seek its advice.

Federal Legislation
Robert E. Rice, MD, Chairman

This Committee met three times during the year issuing reports with recommendations upon which The Council acted.

Pursuant to Planning and Priorities Committee modifications of the committee structure in MSMS, and the existence of the Medicaid Liaison Committee which deals with many government medical care programs, this Committee was restructured with a name change from the Committee on Government Medical Programs to the Committee on Federal Legislation. The former 12-member Committee was expanded to 25 members to include a broader geographic base.

The restructured Committee on Federal Legislation was charged by the Division on Legislation and Socio-Economics to maintain an awareness of federal legislation as it is enacted and to interpret the effects upon the practice of medicine. Therefore, the Committee took under consideration the new Federal Health Planning and Resources Act of 1974 and conducted an indepth survey of the new Act. Of immediate concern is the designation of new health planning areas. The Committee recommended that, because MSMS two years ago was a leading component of the current professional standard review organization designated areas, the same areas should serve for federal health planning. This recommendation differs from the "B" comprehensive health planning regions, and as of this writing no decision has been made on the designated areas.

The Committee will continue its study and oversee the Federal Health Planning and Resources Act as it is effected. At this time, the American Medical Association has filed Notice of Intent to File Suit alleging the Act to be unconstitutional.

Foreign Medical Graduates
C. P. Wen, MD, Chairman

This Committee was active this past year in planning and coordinating the first MSMS sponsored comprehensive medical refresher program. This is an outgrowth of Resolution 17, introduced by Jaime V. Aragones, MD, of Rochester, adopted by the MSMS House of Delegates in 1974. The Committee's program wich was subsequently approved by the MSMS Council in September 1974 was to seek an arrangement with a suitable academic institution in its implementation. The Committee has been successful in collaborating with Oakland University and the first program is to be started on June 2, 1975 for a period of seven weeks. Dr. Moon J. Pak, Chairman of Oakland University Health Sciences, has been designated as the director of the refresher program and was instrumental in developing the course content, in the recruitment of applicants, in selecting the faculty, in arranging for housing, etc., all in close consultation with the Committee.

Registrations are being accepted now for the first seven-week Comprehensive Medical Review Program, June 2 to July 18. The next course is planned for the fall of 1975.

Enrollments will be limited to 50. The tuition will be $200, with an additional charge for housing and meals at one of the Oakland University residence halls. It will be taught by Oakland University faculty and by outstanding physicians in the Oakland-Wayne-Macomb area. The curriculum will include 80 hours of instruction in the basic medical sciences and 160 in the clinical disciplines.

The Course will be financed from tuition receipts plus contributions from organizations and individuals, and hopefully from grants in the future from foundations and agencies. This will be the first activity sponsored by a state medical society to help the foreign medical graduates who constitute 25% of the MSMS membership.

Group Casualty Insurance
William P. Marshall, MD, Chairman

On July 15, 1974 MSMS was notified by Commercial Union Insurance Company that it would not renew the physicians insured under the MSMS umbrella liability program beyond October 1, 1971. The Committee notified all MSMS members insured under the program of this development by memorandum on July 30, 1974.

MSMS insurance administrators, Stratton, Cheeseman and Associates, were requested to survey the entire insurance industry to find a carrier to continue the program. Subsequent developments revealed a deterioration of the market place for professional liability insurance both basic and umbrella.

As a result of these developments, The Council appointed a special committee on professional liability to which Doctor Marshall was appointed as advisor. A comprehensive report on professional liability will be made to the House of Delegates by this new committee and The Council.

Group Life and Health Insurance
Donald G. Blain, MD, Chairman

The Committee on Group Life and Health Insurance continues to monitor the operation and seek improvements in the MSMS sponsored life, disability and health insurance programs.

As a result of the Committee's efforts the $1,000 maximum monthly benefit available under the MSMS disability program has been raised to $1,500. The Committee feels that this improvement is most timely because (1) the problem of general economic inflation, and (2) it will keep the MSMS program competitive with other physician group sponsored disability programs.

The Committee is now reviewing the MSMS Blue Cross/Blue Shield 94000 Group program, especially the advisability and feasibility of adding major medical and dental coverages. Recommendations will be made to The Council upon completion of the review.

Highway Injury
Paul W. Gikas, MD, Chairman

The Highway Injury Committee met on November 28, 1973. It has not met since that date pending the clarification of its status and responsibilities under the new Division System approved by the 1974 House of Delegates.

The Committee considered two bills before the Legislature: House Bill 5180 and House Bill 4635.

House Bill 5180 provided for the regulation and certification of advanced emergency medical technicians and prescribed training requirements and duties for same. The members recommended that MSMS support this piece of legislation, provided it was amended to ensure that EMTs would work only under the direct authorization of a physician or a registered nurse designated by the physician. (Subsequently, the sponsor of HB 5180 withdrew his bill in favor of HB 5732, essentially the same legislation.)

MSMS supported HB 5732, which passed and was signed by the Governor.

House Bill 4635 expanded the state law to assume driver consent to an intoxication test for a person who was involved in an accident and arrested for intoxication. The Committee felt that one section of the bill (625b) was too punitive and would only bring hardship on the family without solving the problem of the drinking or alcoholic driver. It went on record in support of HB 4635, if the objectionable section could be deleted.

Because of the large number of bills of direct concern to the practice of medicine introduced into the 1973-74 Legislative Session, MSMS was unable to actively pursue HB 4635. The bill died in Senate committee.

In addition, the Committee went on record, by a vote of fourteen to one, in support of legislation requiring the mandatory use of seat belts. It expressed its concern about the importance of seeking this legislation to the MSMS Legal Affairs Committee and submitted a resolution on this subject to the Michigan Delegation to the American Medical Association. Unfortunately, the Michigan delegates rejected the Committee's resolution and consequently it never reached the AMA House of Delegates for a vote on the national level.

Joint Practice Commission

The Michigan Joint Practice Commission includes five MSMS members who represent Michigan doctors. They are: Mary L. Cretens, MD; Harold E. Crow, MD; H.R. Henderson, MD; Thomas J. Setter, MD; and Louis R. Zako, MD. Other professions represented include the Michigan Nurses Association and the Michigan Pharmaceutical Association.

The Commission met four times during the past year to consider a variety of problems related to implementing true joint practice as well as attempting to define the term. Matters discussed included the legal considerations of joint practice, problems with third party payors and viable roles in joint practice including the role of the nurse-midwife in Michigan.

Efforts to plan a major conference on joint practice for the purpose of encouraging the development of team practice are continuing. Plans now call for a one-day conference for educators, practitioners and administrators to be held in the fall of 1975. Exact dates and site will be determined at the next JPC meeting on May 28.

Liaison With Medical Practice Board
Robert M. Stow, MD, Chairman

With the enactment of the new Medical Practice Act (Act 185 of the Public Act of 1973) it was determined that formal liaison between MSMS and the Medical Practice Board (formerly Board of Registration in Medicine) should be re-established. The Committee met September 26 and November 7, 1974 to chart the direction of the Committee and to identify the issues on which MSMS and the Board can cooperate to implement the new act.

On recommendation of the Committee, MSMS testified in support of proposed rules governing the utilization of physician assistants as drafted by the Medical Practice Board. A jurisdictional question had developed regarding whether the Board or the Department of Public Health had the statutory authority to regulate PAs. Resolution of the problem remains unclear at this time.

Other issues jointly discussed include the licensure of foreign medical graduates, conceptual recommendations for new rules to implement all provisions of the Act, communications projects to demonstrate the authority and responsibility of the Board, and sufficient funds to permit the Board to function properly.

Items under consideration for the next year include the drafting of Board policies defining minimal standards, as used in the new Act and the information of a panel of medical experts to act as consultants to the Board.

Liaison With The State Bar of Michigan

Interested leaders from both professions began exploratory meetings in the fall of 1973, after this liaison committee had been inactive for several years. The first formal meeting with members appointed from each organization was January 23, 1974, to consider subject areas of mutual concern.

Three task forces were appointed and some meetings were held in 1974 and 1975.

Two of the task forces dealt with "Interprofessional Relationships" and "Medical Records." Their work has not been completed and they will continue.

The third task force, on professional liability, met several times last fall and sent general recommendations for possible legislation to the parent liaison committee. Representatives of the Michigan Association of Osteopathic Physicians and Surgeons, Michigan Hospital Association, and the Physicians Crisis Committee participated in some of the liaison committee discussions. The Liaison Committee in December and January sent recommendations to the State Bar Board and to the MSMS Council for consideration.

To the extent that these recommendations were in concurrence with MSMS policies the ideas and principles were incorporated in the MSMS legislative program and the task force's work has been completed.

MSMS has received reports from a number of component medical societies that are holding ongoing liaison meetings with local attorneys on matters of joint concern.

Maternal and Perinatal Health
Lee B. Stevenson, MD, Chairman

The Committee met four times in 1975.

The Annual Michigan Conference on Maternal and Perinatal Health was held for the thirteenth year and was again a very successful continuing education endeavor for physicians and nurses. The Conference was extended to include a meeting of the Perinatal Association of Michigan.

The yearly continuing education meeting for Committee members was again held at the MSU Biological Station at Gull Lake. The Committee plans a second two-day meeting in October in conjunction with the Perinatal Association of Michigan.

The Committee continued publication and distribution of desk reference cards for use by individual physicians and hospitals; sponsorship of the program for expectant parents; liaison with the Michigan Department of Public Health, Bureau of Maternal and Child Health, and other groups; and sponsorship of the Placental Tissue Registry.

The following Committee studies and projects were continued: the regional maternal mortality meetings and studies, perinatal morbidity and mortality, and professional and lay education. Also under discussion were statistics on gonorrhea, abortions and out-patient surgical facilities, malpractice insurance, and regionalization of perinatal care.

The Committee will develop an education program on family planning for physicians in rural areas of Michigan.

The slide tape program on "The High Risk Pregnancy" was completed and offered to county medical societies and hospitals, and is distributed by the Bureau of Maternal and Child Health, MDPH.

The Subcommittee on Better Utilization of Obstetrical Beds has continued its hearings with representatives throughout the state in its efforts to provide assistance to physicians and others involved in the health planning process at the community level, particularly as that planning relates to provision of obstetrical and newborn servies.

Medicaid Liaison
James D. Fryfogle, MD, Chairman

Pursuant to the directive of the House of Delegates and agreements between MSMS and the Michigan Department of Social Services, complaints about or changes in Medicaid policies and payments are channeled through the Medicaid Liaison Committee and made a part of the agenda for each meeting. Since its last report to the House of Delegates, the Committee met with the directors of the State departments of Social Services and Public Health, the Special Advisor to the Governor on Health and other Medicaid officials on May 15, June 5, July 31, September 18, December 18, 1974, and March 26, 1975.

Much of the Committee's attention was centered on the development of a method whereby MSMS could participate in the resolution of suspected cases of provider abuse of the Medicaid program. The issue developed when a review of unusually high Medicaid payments to physicians caused a great deal of publicity and pressure on the Department to release the names of the physicians involved. MSMS objected to the release of names without first consulting with MSMS and utilizing the cooperation which the Society has demonostrated. MSMS requested that the Department of Social Services inform MSMS of unusually high payments to individual physicians, as cases arise, rather than accumulate these cases over a period of time, so that MSMS could be of immediate assistance. As a result, the agenda of each Medicaid Liaison Committee meeting contains a standing item where the Department reports on cases of suspected abuse. The Committee has carefully reviewed the methodology used by the Department to determine over-utilization on the program and is assured at this time of its effectiveness. The Committee will continue to carefully monitor this activity.

The past year has seen a reduction in the number of complaints by physicians about Department handling of claims. The Committee believes this is evidence of the effectiveness of the liaison activity. Agreement was reached on inclusion and codes for neonatal intensive care units, more adequate reimbursement for certain procedures, payment for consultation services in specific instances where the physician is not a specialist, and changes in the code to limit payment for manipulative procedures.

Issues which are currently under discussion are inclusion of the Medicaid provider identification number on prescriptions and pharmacy invoices, publication of a Medicaid "Provider Listing," policy on oral vaccines, deletion of certain codes and others.

The Committee believes that the liaison activity is a sound one and that it continues to be effective forum for resolution of Medicaid issues affecting the State and members of MSMS.

Medical Aspects of Organized Athletics
Robert H. Evans, MD, Chairman

The Committee met on June 6, 1974 and will meet again in April.

The Committee cooperated with the Great Lakes Athletic Trainers Association in sponsoring a conference for coaches, trainers, students, and physicians in Ann Arbor on March 14-15, 1975. The meeting was attended by 491 persons. Because of its participation in this conference, the Committee did not hold its usual one-day Michigan Conference on the Medical Aspects of Organized Athletics.

The Committee publicized information on the Michigan High School Athletic Association's rule that only doctors of medicine or doctors of osteopathy can give high school athletic examinations, and all component societies were urged to assist in providing team physicians for local high schools.

The Committee heard a report of the "Early Care of the Injured Athlete" program of the American Academy of Orthopaedic Surgeons; and ordered a joint study in cooperation with the Michigan Academy of Orthopaedic Surgeons on the increasing number of motorcycle accidents and resulting injuries.

Planning and Priorities
Frank B. Walker, II, MD, Chairman

This committee did not meet during the past year. Committee members have been observing and monitoring the experimental operation of the new MSMS Division approach to committee work. The recommendations of the Committee on Planning and Priorities to establish five divisions to coordinate and streamline all the MSMS committee work were approved by the MSMS House of Delegates in the spring of 1974. The delegates approved the plans to reorganize committee work without waiting for amendments to the constitution. The amendments were to be proposed at a later date.

The divisions were appointed and an orientation for the members of the five division committees was held at the MSMS Annual Sessions in Detroit in October 1974. On the same day, the five divisions held their organizational meetings. Since then, each division has appointed ongoing committees to handle continuing work. The divisions also have appointed special task forces to study or to conduct special projects on a short term basis.

There appears to be no immediate need to amend the many parts of the MSMS constitution and bylaws that discuss committee work but it seems wise to permit this experiment to continue another year before any formalized action is taken.

Several other matters on the working agenda of the Committee on Planning and Priorities continue to be under study.

Public and Environmental Health
Edward J. Klopp, MD, Chairman

The Public and Environmental Health Committee held four meetings since the last meeting of the House of Delegates.

The Committee has recommended that use of the Dri-Dot® Blood Test for Gonorrhea be discontinued; worked on a new immunization reporting system between physicians, local health departments, and schools; studied the toxicology of the environment; discussed the role of public health medicine and took the position that "qualified public health physicians be in charge of, and accountable for, all programs of state and local health departments, and that responsible medical direction be required and provided for all non-physician health officers;" and considered the environmental factors of nuclear power. It currently has a Special Report before The Council urging MSMS to go on record as being opposed to the Federal Government giving financial assistance to the tobacco industry.

The Council approved recommendations of the Committee that MSMS (1) appoint a physician to serve as the Society's official representative to the Michigan Diabetes Association, (2) support efforts to eliminate the tuberculin skin test from the Michigan School Code and (3) recognize the Michigan Heart Association guidelines for hypertension screening.

In addition to maintaining ongoing liaison with the Michigan Department of Public Health, the Committee has met with representatives from the Public Service Commission, Michigan Heart Association, and Michigan Diabetes Association.

Division Steering
Public Service and Community Relations (Formerly the Public Relations Committee)
Thomas C. Payne, MD, Chairman

The organizational meeting of the Steering Committee for the Division on Public Service and Community Relations was held in Detroit, October 10, 1974, during the 1974 MSMS Annual Session.

The Steering Committee also met December 4, 1974, at the MSMS Headquarters and then again on April 17, 1975. Work of the committee was advanced also at two task force meetings.

The Division Chairman and members of the Steering Committee offered advice and guidance throughout the year to the MSMS Department of Communications on the extensive efforts to inform the physicians, public, legislators, other providers, et al, about the professional liability situation. At the recent meeting on April 17, the Division Committee sent a recommendation to The Council that MSMS should conduct a multi-media campaign using newspaper and television ads during May to mount public pressure behind the MSMS supported bills. The proposed plan of work carried a recommendation that MSMS spend $30,000. Throughout the year, the Division provided speakers about professional liability for component society meetings and public groups, and carried on a wide variety of activities to support MSMS positions.

Members of the Steering Committee decided the first basic jobs are to evaluate and improve further the MSMS efforts to communicate with the public, and with the physicians. To accomplish this, one special task force meeting was held in the Detroit area for physicians invited from the large metropolitan area, and another task force met in Grand Rapids with physicians from the Grand Rapids-Muskegon-Kalamazoo area.

The task force to study ways to further improve communication with physician members (chaired by Thomas J. Setter, MD, Macomb County) offered these suggestions to the Division Steering committee and the MSMS Department of Communications: (1) MSMS should make a philosophical commitment to communicate "with" physicians rather than "to" or "at" physicians; (2) MSMS should explore ways to use the hospital setting to improve communication with members and non-members; (3) MSMS should develop ways to communicate better with the FMGs in Michigan.

The Division Committee concurred with these suggestions.

The other special task force (chaired by Donald E. DeWitt, MD, Ottawa County) considered good ways to tell the MSMS story to the public about physician concerns. The group sent the following suggestions to the Steering Committee: (1) that MSMS continue to provide direction and guidance to components for possible projects, and that that personal liaison between MSMS and components be expanded; (2) that television be emphasized as the prime contact with the public and that MSMS seek to establish key medical leaders to work with local TV media in Michigan; (3) that components be encouraged to establish or continue regular legislative contacts such as the breakfast and luncheon meetings already held by some as a means of further public communication; (4) that a county liaison be established between the MSMS Auxiliary and Medical Assistants; (5) that the monthly MSMS Packet be sent to the component PR chairman and that it periodically contain specific helps to aid him in his job; and (6) that components be urged to make their PR chairman a member of their component executive committee to enable close contact with all society matters which may have public interest or implication.

The Division Committee concurred in these suggestions as workable goals.

Two special task forces exist to carry out two 1974 House of Delegates resolutions which were referred to the former Committee on Public Relations to implement.

A task force on chiropractic education continues under the leadership of Richard H. Gascoigne, MD, Lenawee County. MSMS provided speakers for component meetings in Genesee, Sanilac, St. Joseph, Allegan,Shiawassee, Isabella-Clare, and Barry counties.

The other continuing task force deals with the upgrading of medical assistants re their telephone techniques. This task force includes three representatives of the American Association of Medical Assistants, State of Michigan. During the past year, MSMS provided programs for six telephone techniques workshops for some 400 medical assistants. These programs were held in Kent, Oakland, Kalamazoo, Washtenaw, Saginaw and Jackson counties.

Another task force offers advice and guidance for the "Housecall" television program aired monthly on Channel 56, WTVS, Detroit. Aired for the first time on October 16, the program features three doctor-panelists who answer medical questions phoned in by viewers. Approximately 25-30 questions are answered during the half hour.

Upwards of 200 questions are phoned for each program. Questions are taken by a group of medical assistant volunteers from area chapters of AAMA-Michigan Chapter.

Another MSMS communications activity has been to assist the Michigan Academy of Pediatrics in placing the "Ounce of Prevention" series with television stations in Detroit and Saginaw. This series of topical 15 minute TV tapes was created and produced by Frederick J. Margolis, MD, a Kalamazoo pediatrician who is a member of our Division Steering Committee. Negotiations are underway to interest more stations in the series. Each program carries a credit line "Brought to you through the cooperation of the Michigan Academy of Pediatrics and the Michigan State Medical Society."

MSMS is assisting the new "Physician Radio Network" in a new effort to communicate with physicians.

The Physicians Radio Network is a private, closed-circuit radio network which began broadcasting in the Detroit area in March. Working in cooperation with the Wayne County Medical Society, MSMS staff tapes daily announcements concerning medical news. This radio service is sold by subscription to any doctor in the listening area who wishes to be regularly updated on a broad spectrum of medical events.

The April 17, 1975 meeting combined a business meeting for the Division Steering Committee with a how-to-do-it workshop for the Committee and for invited guests. Invited to the workshop were the public relations chairmen of the various component societies and specialty societies, and representatives of allied organizations and agencies. The Division Committee, building upon previous resolutions from the MSMS House of Delegates and from recommendations of the AMA, suggested a series of possible projects that could be carried on by components and specialty societies with MSMS advice and assistance. These dealt with projects that would (1) Educate patients abut expectations (and help change the climate that today results in a growing number of suits by patients against doctors); (2) Improve press relations; (3) Recruit more doctors; (4) Offer health education by sponsoring public health forums; (5) Inform public about chiropractic; (6) Offer health education through sponsorship of "Ask the Doctor" radio or television programs; (7) Inform local residents on how to get a doctor; (8) Improve telephone techniques of the medical assistants.

State Legislation and Regulations
Thomas R. Berglund, MD, Chairman

The former Legal Affairs Committee had reviewed both state and federal legislation. Pursuant to House of Delegates action in 1974 to implement the recommendations of the Planning and Priorities Committee and to increase the functions of the MSMS Department on Government Relations to more closly oversee operations of the State government departments, the Committee's name was changed to the Committee on State Legislation and Regulations. Federal legislation was referred to the restructured Committee on Federal Legislation.

Under regulations, one full-time staff person has been assigned to maintain liaison with the Department of Social Services and particularly its Medicaid functions, the Department of Public Health, the Office of Health and Medical Affairs, and planning groups and other government agencies.

The Committee has dealt with a number of legislative issues since the last House of Delegates. At the time of the House of Delegates meeting in May, 1974, MSMS was involved in attempting to retain the authority of physicians to control prescription medicine. A generic substitution bill was passed by the Legislature but with the option of physicians to write on any prescription "Dispense as Written" or "DAW," which orders the pharmacist to fill the prescription specifically as the physician writes it. Otherwise, the patient may ask the pharmacist for a less expensive generic equivalent, in which case the pharmacist must provide a substitute if one is available.

In the fall session the Committee was deeply involved in opposing a legislative thrust to expand the authority of chiropractic in Michigan. Through the work of the Committee, the bill was not reported out of the legislative committee in the House and did not pass.

The Committee has played a major role in the MSMS efforts to alleviate the professional liability problem. A number of legislative recommendations have been cleared by the Committee and are covered in an accompanying report on professional liability activities by the Society.

The Committee also is interested in legislation to determine the point of death for purposes of transplantation, in a series of bills to correct errors in the Mental Code that was adopted by the Legislature in 1974, and in appropriations, specifically for medical education, physician fees for the Medicaid programs, residency training for family physicians, and the Department of Public Health.

Utilization Review and Health Insurance Problems
Robert C. Prophater, MD, Chairman

The Committee on Utilization Review and Health Insurance Problems continues to act as an appeal body for utilization and fee review committees of county medical societies. Several appeals were considered by the Committee during the past several months. The Committee continues close liaison with county medical societies, Michigan Blue Cross/Blue Shield and major commercial health insurance companies.

20. Reports of House of Delegates Committees

Certificates of Commendation
Harvey M. Andre, MD, Chairman

Certificates of Commendation were established by the House of Delegates in 1961 as a method by which the Society could give tangible recognition to those physicians who have distinguished themselves in scientific and/or public service. Thus far, sixty-seven Michigan physicians have been recipients of Certificates of Commendation.

This year, the Committee again invited each component medical society to submit nominations. The Committee thoroughly reviewed all nominees and, after much thoughtful deliberation, selected five candidates for the Delegates' consideration.

The Committee is proud to recommend the names of the following outstanding Michigan doctors for Certificates of Commendation:

Mark W. Dick, MD and Louise F. Schnute, MD, formerly of Grand Rapids (for a joint award)

Roy J. Gerard, MD, of Saginaw

William S. Jones, Sr., MD, of Menominee

Frederick C. Swartz, MD, of Lansing

Following are short biographies for your review.

MARK W. DICK, MD, AND LOUISE F. SCHNUTE, MD

Mark W. Dick, MD, was born in Michigan in February 1904, and Louise F. Schnute, MD, a native of Indiana, was born in June 1910. Doctor Dick attended the University of Michigan for his pre-medical training, graduated from the U. of M. Medical School in 1932, served his internship at the University of Iowa and took his pediatric residency at Iowa and at Children's Hospital in Chicago. Doctor Schnute took her pre-medical and medical school training at the University of Indiana, interned at the University of Michigan, and served her residency in pediatrics at the U. of M. and Children's Hospital in Chicago.

Doctors Dick and Schnute came to Grand Rapids in 1937 and 1942, respectively, where they were affiliated with Butterworth, Blodgett Memorial, and St. Mary's Hospitals. In addition to establishing an outstanding husband and wife pediatric practice in the inner city, Doctors Dick and Schnute found time to be active in community affairs involving children's warfare, including crippled children at St. John's Home for 17 years free of charge. He also provided care for the Catholic Social Services programs, Bethany Home, Mary Free Bed Hospital and Rehabilitation Center, and Ken-O-Shea Diagnostic Center for the Handicapped, and was instrumental in establishing the first poison control center in Michigan at Butterworth Hospital.

Since moving to their retirement home in Colorado in 1974, Doctors Dick and Schnute have worked for a month as volunteers in an Indian Reservation in New Mexico.

Over 500 citizens in Grand Rapids paid tribute to Doctors Dick and Schnute when they left Grand Rapids, demonstrating the high esteem in which they are held in that community.

ROY J. GERARD, MD

Roy J. Gerard, MD, was born in Bay City, Michigan in December 1924. He took his pre-medical and medical school training at the University of Michigan and interned at St. Luke's Hospital in Saginaw. Doctor Gerard spent 19 years in Saginaw, serving that community as a family practitioner, where he was affiliated with St. Luke's, St. Mary's, and Saginaw General Hospitals.

In addition to serving on numerous hospital committees, Doctor Gerard has been a member of the Blue Shield Board of Directors, a member of the Advisory Committee to Delta College Nursing School, Coordinator of the Saginaw Visiting Nurses Association, and team physician at St. Stephens High School. He has been president of the important Saginaw County committees; serves the Michigan Academy of Family Physicians as a member of the Board of Directors. Coordinating Chairman of the Michigan Family Practice Residencies, a member of the Education Commission, and Vice Speaker of the Congress of Delegates; and has been an MSMS Delegate for a considerable period of time.

In January, 1975, Doctor Gerard was appointed Professor and Chairman of the Department of Family Medicine, Michigan State University College of Human Medicine.

Roy J. Gerard, MD, is highly respected by his colleagues for his outstanding achievements as a physician and humanitarian as well as his contributions to medical education.

WM. S. JONES, SR., MD

Wm. S. Jones, Sr., MD, was born in Jeffersonville, Georgia, in June 1890. He took his pre-medical training at the University of Georgia, in 1915 graduated from Rush Medical College, served his internship at Presbyterian and Children's Memorial Hospital in Chicago and his residency in Otolaryngology and Ophthalmology at the University of Pennsylvania and Knapp Clinic in New York City. Following certification by the American Board of Otolaryngology in 1927, he pursued postgraduate training at the University of Vienna.

Doctor Jones has practiced medicine in Menominee since 1922. He has been affiliated for many years with the Menominee County Lloyd Hospital (formerly St. Joseph Hospital), often serving as its Chief of Staff, and has served as Chief of Staff of Marinette General Hospital in Marinette, Wisconsin.

In addition to having held every elective position of the Menominee County Medical Society, Doctor Jones was for many years a delegate to the MSMS House of Delegates, served as a member of the MSMS Council and as Chairman of the Finance Committee, and was elected President of the Michigan State Medical Society in 1956. He also was influential in the development of the Beaumont Memorial at Mackinac Island.

During his many years in Menominee, Doctor Jones has done much to foster and encourage postgraduate education and participation in local, state, and national medical affairs. His tireless efforts during 60 years of practice have made him an inspiration to his colleagues.

FREDERICK C. SWARTZ, MD

Frederick C. Swartz, MD, was born in Akron, Ohio, in March 1902. He took his pre-medical training at Miami University of Ohio and graduated from the University of Cincinnati Medical School in 1932. He interned at Cincinnati General Hospital, served his residency in Internal Medicine at Fort Hamilton Hospital in Hamilton, Ohio, and selected Mayo Clinic for his postgraduate studies.

For the past thirty-five years, Doctor Swartz has practiced medicine in Lansing, where he is affiliated with Edward W. Sparrow Hospital and St. Lawrence Hospital. In addition, he is Medical Director of Burcham Hills Retirement Center and a member of its Board of Directors.

Doctor Swartz was a delegate to the 1971 White House Conference on Aging and a member of its Technical Committee on Employment; has been Chairman of the American Medical Association Committee on Aging since 1957, and AMA representative on the Council of Long Term Care Facilities of the Joint Commission on Accreditation of Hospitals since 1971; a member of the MSMS Committee on Aging and Advisor to the MSMS Committee on Rural Medical Services; and a member of the State of Michigan's Commission for Services to the Aging.

The many contributions Doctor Swartz has made on the local, state and national level in behalf of our older citizens has made him one of the foremost authorities on the problems of the aging.

THE HOUSE, acting as a committee of the whole, approved the report of the Committee. Certificates of Commendation were presented to Doctors Mark W. Dick and Louise F. Schnute (a joint award), Roy J. Gerard, William S. Jones, Sr., and Frederick C. Swartz.

Constitution and Bylaws
David J. Millard, MD, Chairman

The following Bylaws amendments, which were contained in the Committee's Annual Report, are presented on first reading for consideration by the House of Delegates:

1. TWO NOMINATIONS FOR PRESIDENT ELECT — As instructed by the MSMS House of Delegates in 1974, the Committee has developed Bylaws language to provide for two nominations for the office of President-Elect.

RECOMMENDATION: That the following Bylaws amendment be adopted on first reading – Amend Chapter 9, Section 13 as follows: Sec. 13 ELECTION OF

OFFICERS – Election of officers of the Society, except that of the Secretary, Assistant Secretary, Treasurer and Assistant Treasurer, shall take place at the last meeting of the House of Delegates at each Annual Session. All nominations shall be made from the floor of the House with the exception of the Secretary, Assistant Secretary, Treasurer, and Assistant Treasurer who are nominated by The Council. THERE SHALL BE AT LEAST TWO NOMINEES FOR THE OFFICE OF PRESIDENT-ELECT. If there be only one nomination for any office OTHER THAN PRESIDENT-ELECT, the candidate so nominated may be elected viva voce.

2. CERTIFICATION OF VOTING MEMBERSHIP TO COMPONENT SOCIETIES AS BASIS FOR NUMBER OF DELEGATES — At the request of the MSMS Membership Department, the Committee considered the matter of appropriate time to certify voting membership to component societies, for use in determining the number of delegates to which a society is entitled. Because of the problems in changing from a fall meeting to a spring meeting as explained by the staff, the Committee believed that the Bylaws should specify a specific date when such a count should be taken, regardless of the time of the House of Delegates meeting.

RECOMMENDATION: That the following Bylaws amendment be adopted on first reading – Amend Chapter 9, Section 3, first sentence, to read:

Each component society shall elect the number of delegates to which it is entitled. That number of delegates shall be determined by the State Society as of December 1 preceding the House of Delegates meeting.

3. COMPONENT SOCIETY CONSTITUTIONS AND BYLAWS — The Committee has requested all component societies to bring their Constitutions and Bylaws into conformance with the MSMS Constitution and Bylaws and to file a copy of the revised document at the State Society headquarters.

Several have been received, but we would urge that all component society delegates check with their local societies and see that the document is forwarded to MSMS headquarters promptly, if this has not already been done.

THE HOUSE disapproved the recommendation providing for two nominations for the office of President-Elect.

THE HOUSE approved on first reading the bylaws amendment to Chapter 9, Section 3, first sentence. (In accordance with Bylaws provisions, it will be laid over to the next session for final reading.)

Professional Liability
Arthur H. Johnson, MD, Chairman

As authorized by The Council, pursuant to House of Delegates directives in 1974, the Committee on Professional Liability has studied the problems of professional liability with particular focus on (1) availability and cost of professional liability insurance for all physician classes, (2) innovations in insurance e.g., deductibles, assigned risk pools and no-fault insurance, (3) alternatives to litigation for disputes involving medical malpractice, that is, screening panels and arbitration mechanisms, (4) possibilities of an MSMS sponsored insurance program, (5) possibilities of establishing a self-insured medical liability program by MSMS, (6) legislation to achieve an improved legal climate for malpractice litigation.

The Committee met with Insurance Commissioner Demlow; officials of leading malpractice insurance carriers including Medical Protective, Shelby and The Hartford; and with MSMS legal counsel.

It surveyed MSMS members to ascertain information on their present coverage, facts on claims and suits and their perception of the gravity of the situation. 2,000 physicians have responded.

Also, the other 49 state medical societies were surveyed as to their experience with sponsored plans, arbitration and screening panels.

FINDINGS AND CONCLUSION: **Insurance Availability and Cost:** Medical Protective Company, which insures about 65 per cent of the market in Michigan, no longer will write new physicians.

Shelby, the second largest writer in Michigan will begin a systematic withdrawal from Michigan on June 1.

Other carriers, such as St. Paul and Aetna, are in the process of not renewing many of their insured, and with rare exception will take no new business.

In view of this situation and in view of the specter of the State of Michigan being unable to provide insurance for the ordinary increment of 600 new physicians a year, the Insurance Commissioner through the Legislature has proposed a State Medical Malpractice Program which would be financed by physician premiums and, when necessary, assessments against other insured physicians in Michigan.

The legislative proposal has passed the Senate and now lies before the House Committee on Insurance. MSMS has testified against the assessment provisions of the pool.

INSURANCE INNOVATIONS: Insurance companies historically have shown little or no interest in offering deductible type insurance policies because such policies do not relieve them of the cost of defense which begins with the filing of a claim. An assigned risk pool (workable for automobile insurance) does not lend itself to professional liability insurance because of the relatively small number of insured to share the extra premium surcharges.

NO-FAULT: No-fault medical malpractice programs have been considered. The present constitutional challenge to no-fault auto insurance, however, makes passage of such legislation very unlikely at the present time. If this approach is deemed desirable, several years probably would be required to make it law. The Michigan auto insurance law took seven years in development.

SCREENING PANELS AND ARBITRATION: Insurance companies are generally not in favor of screening panels or voluntary arbitration as a method of handling malpractice claims because these mechanisms usually do not preclude further litigation and may actually aid the plaintiff's case.

In 1964 the Ross-Loos Medical Group in Los Angeles added a binding arbitration provision to their health care insuring agreement which has since been upheld by the California Supreme Court. This is an arbitration agreement before the fact. It has been reported that 35 claims have been filed since this provision went into effect. Thirty-two cases were settled in advance of arbitration. Three cases went through formal arbitration; the medical group won two and nothing was paid to the plaintiff. One case was settled for $70,000.

The HEW Commission on Medical Malpractice found the utilization of contractual binding arbitration is an innovative method of resolving malpractice disputes that justified continued experimentation.

Michigan does have statutory provision for binding arbitration. It is seldom used, however, because the physician, the plaintiff and the insurance company must all agree to this procedure before it can be invoked.

MSMS SPONSORED PROGRAM: The MSMS Committee on Professional Liability, Mr. Demlow, and Mr. Cheeseman, working from different viewpoints, all arrived at the conclusion that a sponsored program is the only way to effect an immediate remedy to the professional liability problem.

The Committee on Professional Liability recommended to The Council that MSMS proceed toward establishment of an MSMS-sponsored medical malpractice insurance proposal. Activity then rested with The Council and other special committees. However, we are informed that after intense study the viability of a sponsored plan indicated that MSMS should move in other directions.

MSMS SELF-INSURED PROGRAM: A second option approach to a sponsored program considered by the Committee was an MSMS self-insured program or some such variation. This approach would need the same ingredient for success, namely participation, that the MSMS sponsored program must have.

The Committee has been informed that The Council is proceeding along a self-insured program and that a proposal will be put before the House of Delegates at this annual meeting.

LEGISLATION: The Committee, after extensive study, recommended several legislative approaches to The Council which are included in subsequent recommendations listed in this report.

THE CANADIAN SYSTEM: The Committee initiated a study of why medical malpractice insurance is no problem in the nation of Canada. Contact was established with the Canadian Medical Protective Association, and after some initial discussion the Canadian Medical Protective Association advised that it had had over the years several contacts with medical societies from the various United States and that the difference in the judicial system between the two countries precluded any further discussion. The Committee finds that the Canadian system offers no help or guidance for Michigan physicians.

EDUCATION: In addition to many appearances by the Chairman, by members of the Committee, and by staff before component medical societies, the Committee sponsored on September 5, 1974 a symposium on the medical malpractice situation, in Northland Inn, Southfield. The Committee also directed the publication of factual data as gathered by the Committee over the year's study.

On September 25, the Committee made several interim recommendations to The Council designed to implement the study of the sponsored insurance program and subsequently a self-insurance program; requesting that an annual survey by MSMS members vis-a-vis medical malpractice complaints be carried out; that the problem in Michigan be made known to the American Medical Association; and recommended the following legislative program which The Council adopted:

a. That MSMS support legislation for contractual and binding arbitration.

b. That MSMS seek legislation clearly defining the first day of the Statute of Limitations.

c. That MSMS encourage passage of the statute from Maryland requiring reporting by insurance companies of all malpractice complaints against insured.

d. That an Affidavit of Merit be required when a malpractice complaint is filed.

e. That sources of collateral income be made known in medical malpractice cases.

The Council re-referred these legislative recommendations to the Committee on State Legislation which in turn supported the recommendations, and they are in bill form before the Legislature today.

CONCLUSION: The Committee feels that it has carried out its charge as defined by the House of Delegates in 1974 and that it has made appropriate and in-depth studies and charted the course for MSMS in the current medical professional liability crises. The Committee members want to commend John W. Grigg, MD, Bay City, who chaired the Committee until January of this year, when he was forced by pressure of his practice to resign.

The Committee feels at this time it should be disbanded in favor of other committees dealing with more immediate problems in the malpractice arena.

Reference Committee on Ways and Means
William Haeck, MD, Chairman

The Ways and Means Committee met on April 17 to consider in detail the financial position of MSMS and to review action taken during the year which has a definite financial impact on the Medical Society.

The first order of business was to review the budget process for those members of the Committee who might be unfamiliar with it. Following this, complete copies of the 1974 audit and the financial report up through the time of the meeting were distributed for examination and discussion.

After analyzing these two documents in detail, the Committee concludes that MSMS is in sound financial shape. The Committee is most pleased to see that at the end of fiscal 1974, the net society income was almost $46,000 in the black for the year. It is also most encouraging to see how precise the budget process works, since there was only a 1.6% difference in the amount spent in fiscal 1974 as compared to the amount budgeted. The Committee would like to commend Ernest P. Griffin, Jr., MD, Finance Committee Chairman, and John R. Ylvisaker, MD, Treasurer, for their concerted efforts to keep the budget in line.

Next, the Committee examined the performance of the investments which make up the three MSMS funds; 1) the Operating Fund which is used to finance annual

MSMS FUNDS

1968-1974

TOTALS	CAPITAL RESERVE	CREATIVE RESERVE	OPERATING
Gain or (Loss) on Sale	($23,294)	($99,880)	
Interest Income	46,758	54,781	$158,177
Dividend Income	50,883	34,314	
Expenses	8,990	12,921	
Net Change	65,357	(23,706)	158,177
TOTAL NET CHANGE	$199,828		

MSMS operations; 2) the Capital Reserve Fund which serves as funding for depreciation of the building, furnishings, and equipment; and 3) the Creative Reserve Fund which serves as a research and development fund, available to finance important projects of MSMS.

The Committee notes that, while some of the investments have not fared very well over the past year, this is due to the extreme fluctuations in the stock market and is being experienced by other investment groups. Some of the investments have experienced gains, and with the projected upswing in the economy later this year, it is thought that the other holdings should show an increase also. Over the seven years that the funds have existed, a total gain of almost $200,000 has been experienced.

The Committee then went on to examine the 1975 budget and its projected expenditures. A considerable amount has been spent thus far on MSMS' extensive efforts on the professional liability situation, and these expenses were looked at closely. On May 3, the Finance Committee is to study various proposed revisions to the budget so as to account for these extra expenditures.

The Committee has been informed that the revised budget may reflect a small deficit for the year. This does not, however, take into account the money spent on a feasibility study of establishing a mutual insurance company by the MSMS. Should the House decide to establish such a company, this money would be recovered.

The Reference Committee then discussed its further role as the financial watchdog of the House of Delegates. As a result of its discussions the members of the House Ways and Means Committee have asked that they be given copies of an upcoming Performance Review Report. Furthermore, as the financial watchdog of the House, we believe we, as members of the House Ways and Means Committee, should receive regular reports, at least quarterly, from the Finance Committee regarding investment of the various funds.

In order tht the Ways and Means Committee may better perform its duty and be more responsive to the House, it is recommended that the House Ways and Means Committee have continuity in its membership with a slow rotation of members.

The Committee has reviewed the financial impact to the membership of adoption of various resolutions presented to the House at this session. Chairmen of Reference Committees were informed of these cost impacts.

THE HOUSE adopted the report of the Reference Committee.

21. Resolutions

• RESOLUTION 75A-1

Drug Selection by Pharmacists
Thomas R. Berglund, MD, Kalamazoo County

House Action: Adopted

Whereas, the State of Michigan has enacted legislation permitting substitution of generic drugs by the pharmacist except when vetoed by the attending physician, and

Whereas, it is being proposed that drug selection might also properly belong to the pharmacist, and

Whereas, only the attending physician is capable of such drug selection, based upon his knowledge of the patient's history, physical findings and laboratory data, and

Whereas, the right of the patient to physician direction and advice must be protected; now, therefore be it

RESOLVED: That MSMS go on record in opposition to drug selection by anyone other than the attending physician, and that the Governor, the Legislature and the public be so informed.

• RESOLUTION 75A-2

Equal Fee for Equal Service
T. A. Barton, MD, Livingston County

House Action: Adopted as Amended

Whereas, the service which is performed by a physician within the range of his demonstrated competence as determined by his peers is of equal value to the patient regardless of the geographical locality or specialty status of the physician, and

RESOLVED: That MSMS uphold the principle of equal fee for equal service and use its influence to encourage acceptance of this principle by insurance companies operating in the health field in Michigan.

• RESOLUTION 75A-3

Requirement for Roll Call Votes by The Council
T. A. Barton, MD, Livingston County

House Action: Substitute Resolution (in lieu of 75A-3) Adopted

Whereas, the resolution offered is an attempt to increase awareness of the individual Council member's actions and stands on important concerns of MSMS members, and

Whereas, if an individual's opinion or vote was available, constructive or critical opinion by MSMS members could be more easily directed to the individual, and

Whereas, a roll call vote of the AMA Delegation at the AMA delegate meetings raises technical problems and the resolution's sponsor agreed to deletion of this part of the resolution, therefore be it

RESOLVED: That the MSMS Council, in all matters of importance, particularly those involving final action on policy matters shall have a roll call vote recorded by the Secretary, this record to be available to the members, and be it further

RESOLVED: That the Chairman of the MSMS Council shall have the obligation to decide on which matters a roll call vote may be eliminated, as guided by the Committee's rules of procedure and MSMS Constitution.

• RESOLUTION 75A-4

Unified Membership
Arnold Brown, MD, Oakland County

House Action: No Action

Whereas, the American Medical Association is the only group that speaks for all physicians in the country, and

Whereas, continued pressure is being brought upon the medical profession by a government with its bureaucracies, and

Whereas, the AMA has the ability to counteract these detrimental forces and this power is directly proportional to the number of members of the AMA, and

Whereas, a small proportion of Michigan physicians who are accepting the benefits of county and state membership are getting a "free ride" from the members of the AMA; therefore be it

RESOLVED: That in Michigan membership in the county and the state medical societies also include membership in the AMA.

• RESOLUTION 75A-5

Regional Election of AMA Delegation
T. A. Barton, MD, Livingston County

House Action: Substitute Resolution (in lieu of 75A-5) Adopted

Whereas, some members of the Michigan State Medical Society have voiced the opinion that they would prefer a regional election of delegates to the AMA rather than the at-large method currently used, and

Whereas, this group voices the opinion that communications of their problems and the delegates' views on their problems would be more efficiently served by regional elections, and

Whereas, the Committee, after consideration of all the ramifications of election methods, feels that the present method has many desirable features but recognizes some of the problems of communications, therefore be it

RESOLVED: That the present delegates to the AMA devise a system of increased communications and visibility with Michigan State Medical Society members and county societies. This communication is to make easily available each delegates's voting record on an important AMA issue.

• RESOLUTION 75A-6

Maximum Ceiling on Medical Malpractice Awards
Frederick V. Minkow, MD, Oakland County

House Action: Substitute Resolution (in lieu of 75A-6, 75A-13 and 75A-35) Adopted

Whereas, a great amount of activity in the 1975 Legislature portends progress against the threat of medical malpractice litigation for Michigan physicians, but will not serve as a permanent panacea for the problem; and

Whereas, plans for the next step are always necessary; therefore be it

RESOLVED: That The Council direct the appropriate MSMS body to develop longer term legislative programs that would:

a. Establish further limits on medical malpractice judgments;

b. Prohibit divulgence of a defendant's insurance coverage to the plaintiff before trial; and

c. Require that in cases where no cause is found, that the plaintiff be responsible for actual costs incurred by the defense.

• RESOLUTION 75A-7

Limited Malpractice Insurance Coverage
Frederick V. Minkow, MD, Oakland County

House Action: Disapproved

Whereas, medical malpractice insurance has become either unavailable or excessively expensive for physicians in certain specialties, and

Whereas, insurance could be readily available immediately to all physicians if coverage was reduced to a lower amount than is commonly carried in this state, and

Whereas, lower coverage would be less enticing to those plaintiffs and their legal representatives, and

Whereas, large settlements would become less likely, and

Whereas, the overall cost of insurance would be lowered; therefore be it

RESOLVED: That the House of Delegates support the acceptance of an amount of $10,000 for each claim and $30,000 for aggregate claims to be the amount of liability insurance desirable and acceptable for physicians in the State of Michigan.

• RESOLUTION 75A-8

Nuclear Power Plants
H. Ross Hume, MD, Northern Michigan

House Action: Referred to MSMS Council for further study

Whereas, radioactivity is known to cause leukemia, cancer, birth and genetic defects, and

Whereas, the one hundred thousand megawatts of nuclear electricity projected for this country before 1980 would generate as much long-lived radioactivity as the fissioning of about 100,000 Hiroshima bombs per year, plus 40,000 pounds of radioactive plutonium-239 annually, and

Whereas, one tablespoonful of plutonium-239 represents the official maximum permissable body burden for 200,000,000 people, and

Whereas, radioactive waste from nuclear power plants, which includes plutonium-239, must be kept out of the environment for tens of thousands of years or longer, according to the Atomic Energy Commission, and

Whereas, more than 99.99% of this radioactivity must be kept isolated since the escape of 00.01% is the radioactive equivalent of 10 Hiroshima bombs per year, and

Whereas, nearly perfect containment of radioactivity is not just a straightforward engineering problem, but rather is a problem which requires fixes for carelessness, error and overconfidence on the part of thousands of human beings, and

Whereas, emergency core cooling safety systems in nuclear plants have not been successfully tested, having failed six out of six times in miniature tests, and

Whereas, there is no safe disposal of high level fission wastes but rather perpetual guardianship, and

Whereas, nuclear fission is the only method of making electricity which compromises the future for essentially all generations to come, and

Whereas, by the AEC's own estimates, a maximum intensity accident could cause thousands of deaths and billions of dollars of property damage, and

Whereas, private insurance ($90,000,000) and Price-Anderson Act coverage ($450,000,000; an outright payment by the taxpayer) would cover only a fraction of losses, and

Whereas, these plants, having taken over twenty years and over 20 billion dollars in government research and development funds have yet to produce a net balance of electricity, and

Whereas, only a small fraction of research and development funds for electrical energy have gone to energy conservation and to sources other than nuclear; such as coal, solar, wind, tides, geothermal, organic wastes, etc.; therefore be it

RESOLVED: That the Northern Michigan Medical Society go on record as favoring a five-year moratorium on nuclear power plant construction coupled with intense research and development programs for other sources of electrical energy and for conservation of electrical energy, and be it further

RESOLVED: That this resolution be distributed to:

1. The House of Delegates of the Michigan State Medical Society.
2. Each component medical society of the Michigan State Medical Society.
3. Our state legislators.
4. Mr. Mark Mason, Governor Milliken's environmental advisor.
5. Senators Philip Hart and Robert Griffin and Representative Phillip Ruppe.

• RESOLUTION 75A-9

MSMS Membership, a Requirement for Licensure
E. G. Moehn, MD, Macomb County

House Action: Disapproved

Whereas, good medicine is dependent on the quality of doctors, and

Whereas, MSMS should have the ability to maintain the quality of its membership; therefore be it

RESOLVED: That membership in MSMS shall be a requirement for license to practice medicine in Michigan.

• RESOLUTION 75A-10

Classification of Life Membership
Robert D. Swedenburg, MD, Muskegon County

House Action: Disapproved

Whereas, the Michigan State Medical Society Constitution and Bylaws Chapter 2, Section 8, states:

> (a) A doctor of medicine who has maintained an active membership in good standing for 25 years in any one or more constituent state societies of the American Medical Associaton, with any five years in Michigan, with dues paid for the previous calendar year and who 1) has attained the age of 70 years or 2) has been in practice for 50 years, may, upon application and recommendation of his component society made at least 30 days in advance of an Annual Session of the House of Delegates, be elected by the House of Delegates to life membership in this Society. Such election shall be preceded by certification of the State Society in which he has maintained membership as to the required number of years of membership and good standing, and

Whereas, that due to the number of specialties in medicine today which requires more years for a Doctor of Medicine to complete his training and also to begin his practice; therefore be it

RESOLVED: That the Constitution and Bylaws of the Michigan State Medical Society be changed to read in Chapter 2, Section 8, as follows:

(1) has attained the age of 65 years or
(2) has been in practice 45 years.

• RESOLUTION 75A-11

Use of Term Professional Liability of Malpractice
Richard C. Deming, MD, Jackson County

House Action: Adopted

Whereas, malpractice as a descriptive term poorly defines the meaning for which it is intended, and

Whereas, in spite of the fact that a thorn by any other name will still be a thorn, and

Whereas, any improvement, however slight, is of benefit, therefore be it

RESOLVED: That the MSMS refrain from the use of the term malpractice and use a more accurately descriptive term "professional liability" and encourage others to do the same.

• RESOLUTION 75A-12

Ultimate Disposal of Resolutions
Richard C. Deming, MD, Jackson County

House Action: Substitute Resolution (in lieu of 75A-12) Adopted

Whereas, the Committee has been informed that an index by subject of resolutions has been kept for the past 20 years by the Michigan State Medical Society, although this material has not been distributed on a regular basis, therefore be it

RESOLVED: That the status of every resolution from this meeting henceforth be summarized from the present tabulations and distributed to the members of the House of Delegates at six month intervals.

• RESOLUTION 75A-13

Divulgence of Liability Limits to Plaintiff Attorney

Richard C. Deming, MD, Jackson County

House Action: Substitute Resolution (in lieu of 75A-6, 75A-13 and 75A-35) Adopted. See 75A-6.

• RESOLUTION 75A-14

Expansion of the "Fifth Pathway" to Licensure

Gerald F. Conway, MD, Oakland County

House Action: Adopted as Amended

Whereas, the American Medical Association Council on Medical Education established in 1971 a program of clinical clerkships leading to eligibility of certain foreign medical graduates for AMA-approved, post-graduate training (the so-called "fifth pathway" program), and

Whereas, the Michigan Board of Registration in Medicine approved in 1972 the licensing of "fifth pathway" participants for purposes of further training and practice after fulfilling certain criteria, and

Whereas, "fifth pathway" programs must be under the direction of medical schools, and

Whereas, the "fifth pathway" program is felt to be deficient in certain areas of medical education, notably in basic science preparation and clinical experience, by the Council of Deans of the Medical Schools in the State of Michigan, therefore be it

RESOLVED: That the Education Liaison Committee review this "fifth pathway" to licensure together with the Council of Deans, and make recommendations to The Council of MSMS.

• RESOLUTION 75A-15

Donation of Whole Body or Organs

Robert H. Evans, MD, St. Joseph County

House Action: Adopted as Amended

Whereas, it would be desirable to have a uniform method of designating body or organ donations, and

Whereas, it has been done satisfactorily in other states by utilizing the driver's license; therefore be it

RESOLVED: That MSMS send a letter to the Michigan Secretary of State urging that an area on the Michigan driver's license be designated to pledge the donation of whole body or organs.

• RESOLUTION 75A-16

Closer Relationship Between Council and the House of Delegates

Walter B. Long, MD, Calhoun County

House Action: Disapproved

Whereas, it is most necessary and desirable for the several members of the MSMS Council to be as responsive as possible to the House of Delegates and the many members which they represent, and

Whereas, a close harmony and mutual trust needs to be always present between the House and Council and a free exchange of information is essential to that trust and harmony; therefore be it

RESOLVED: That effective on adoption of their resolution that all new members of The Council be also a delegate and that this in no way refers to present members of The Council unless they so elect.

• RESOLUTION 75A-17

Medical Stamp Program

Walter B. Long, MD, Calhoun County

House Action: Disapproved

Whereas, the bureaucracy involving the administration of Medicaid and Medicare is exceedingly expensive, and

Whereas, each county or township has a welfare agency that is capable of caring for these duties, and

Whereas, the Stamp Program for payment of medical bills re: pharmacy, hospital and doctors fees would eliminate the present structure and paper work load of both state and federal departments; therefore be it

RESOLVED: That MSMS and local (county) societies work for a "Medical Stamp Program" wherein the patient pays directly, by use of Medical Stamp for all medical and dental bills, hospital and pharmacy bills and that the Medical Stamp may be redeemable at local banks for cash or payment on taxes, federal, state and local taxes.

• RESOLUTION 75A-18

Discriminatory Uses of Having a Medical Practice Board

Walter B. Long, MD, Calhoun County

House Action: Disapproved

Whereas, the Medical Practice Board is a discrimination against physicians and that the fees are excessive and arbitrary, and

Whereas, the interference and regulation of the medical profession and not the law profession by a state agency is again discrimination toward a minority group; therefore be it

RESOLVED: That MSMS institute within 90 days of this meeting of the House of Delegates, a class action suit in the courts of this state or federal court, if need be, to have this and other laws like it set aside until *all* professions are so regulated and licensed.

• RESOLUTION 75A-19

Medical Society Develop Its Own Area of Law

Walter B. Long, MD, Calhoun County

House Action: Substitute Resolution (in lieu of 75A-19, 75A-22, 75A-30, 75A-31, 75A-33, 75A-34 and 75A-40) Adopted.

Whereas, the medical malpractice insurance problem, more appropriately identified as professional liability problem, requires a multi-faceted legislative approach, and

Whereas, the Professional Liability Committee, The Council, the Committee on State Legislation, and other agents of the Michigan State Medical Society have identified a program of legislation designed to alleviate the problems of professional liability insurance and litigation in Michigan, which ideas are now in bill form and before the Legislature in this session; and

Whereas, the viability of either the State sponsored or an MSMS sponsored insurance program is dependent upon a reasonable atmosphere within which to work; and

Whereas, the objectives of the several MSMS sponsored legislative bills are addressed in several Resolutions before this House of Delegates; therefore be it

RESOLVED: That this House of Delegates re-affirms its support and strongly urges the Legislature to enact forthwith legislation that would:

a. Establish contractual and binding arbitration in Michigan for medical malpractice allegations;

b. Clearly define the first day of tolling of the "Statute of Limitations" in medical malpractice cases;

c. Extend "Good Samaritan" immunity to emergencies in hospitals;

d. Provide immunity to physicians who serve in any review processes;

e. Require insurance companies to report all malpractice allegations filed in Michigan;

f. Require an "Affidavit of Merit" when malpractice claims are filed;

g. Require insurance companies to accept arbitration when resolving malpractice complaints;

h. Prohibits soliciting of, sale of, or purchase of information which could lead to malpractice litigation; and be it further

RESOLVED: That a copy of this Resolution be distributed to every member of the Legislature, to the Governor's Office and to other associations of health professionals.

• RESOLUTION 75A-20

Equal Treatment Under Law
Walter B. Long, MD, Calhoun County

House Action: Disapproved

Whereas, attorneys are examined and allowed to practice through the auspices of their own state organization, and

Whereas, the physicians are examined and licensed by an agency of the state, and

Whereas, this is discrimination against a minority group — namely, the physicians; therefore be it

RESOLVED: That the MSMS (1) establish its own examination and licensing agency, and (2) that MSMS start a class action suit against the State of Michigan and the courts of Michigan re: discriminatory practices toward physicians and licensing procedures.

• RESOLUTION 75A-21

Corrections for Malpractice Suit Abuses
Walter B. Long, MD, Calhoun County

House Action: Substitute Resolution (in lieu of 75A-21 and 75A-46) Adopted

Whereas, the value and effectiveness of the contingency fee system has been challenged from many sources and many points of view; and

Whereas, a continuous search for better solutions is in order; therefore be it

RESOLVED: That we continue to direct our efforts to the elimination of the contingency fee system, and be it further

RESOLVED: That we challenge the legal profession to develop a different and broad-based program with open access to legal services; and be it further

RESOLVED: That MSMS continue to study the no-fault concept as a possible solution to the malpractice problem.

• RESOLUTION 75A-22

Unfairness of Statute of Limitations
Walter B. Long, MD, Calhoun County

House Action: Substitute Resolution (in lieu of 75A-19, 75A-22, 75A-30, 75A-31, 75A-33, 75A-34 and 75A-40) Adopted. See 75A-19

• RESOLUTION 75A-23

Protection of Minority Group Members
Walter B. Long, MD, Calhoun County

House Action: Disapproved

Whereas, in many cases in which malpractice suits are brought, the defendent physicians may have only seconds or minutes to make a life and limb decision, and

Whereas, attorneys may take months or years in preparation of a case and have a leisurely time in which to research precedents, and

Whereas, many juries make judgments and awards on an emotional appeal instead of the medical merits of a case; therefore be it

RESOLVED: That any jury hearing a malpractice case be made up equally of laymen and physicians, especially in that particular area of a defendant doctor's work area in general practice, surgeon, ENT, etc., and further be it

RESOLVED: That any attorney trying a case for a plaintiff on a contingency fee basis be a partner with the plaintiff in the case before the bar and his total fee and costs, both direct and indirect, be made a part of the evidence.

• RESOLUTION 75A-24

Protection of Patients' Civil Rights
Walter B. Long, MD, Calhoun County

House Action: No Action

Whereas, most patients are unaware of their civil rights as regards to their medical records, and

Whereas, most patients may unwittingly sign release forms for release of medical information uninformed that any information thereby gained may be used against them, and

Whereas, many insurance companies and government agencies put this information on computer tapes and into data banks which may be used by countless thousands of companies and agencies, and thus the privacy and confidentiality of the patient is violated; therefore be it

RESOLVED: That MSMS cause to be made law, by its good offices, with the Legislature and by advertising and editorializing in state newspapers and periodicals effective prevention of this breach of a patient's rights, and be it further

RESOLVED: That the express informed written permission by the patient should be for specific information concerning a particular case in question, and all other records for the patient's confidentiality must be zealously protected (this also extends to Medicaid and Medicare patients).

• RESOLUTION 75A-25

Unconstitutionality of Malpractice Laws and Correction Thereof

Walter B. Long, MD, Calhoun County

House Action: Disapproved

Whereas, the Legislature is populated in a significant number by attorneys and thus the laws thereby are promulgated by attorneys, which are interpreted by attorneys and tried in the courts between two attorneys in front of another attorney usually called a judge, and

Whereas, the laws so passed and interpreted and argued thus in court are usually unintelligible to the public and confusing and confounding in general, and

Whereas, attorneys are officers of the courts and thus a possible conflict of interest evolves in both the making of laws and trying of these laws in courts, and

Whereas, the laws regarding malpractice and court procedures are determined only by attorneys; therefore be it

RESOLVED: That MSMS study the possible unconstitutionality of these and thus other laws and that the medical profession be equally represented in the creation of any and all laws regarding the medical profession and that the laws so proposed be presented to the House of Delegates for its advice and consent.

•RESOLUTION 75A-26

Legal Defense Fund in Negotiations with Third Party Carriers

Orville W. Oughtred, MD, Macomb County

House Action: No Action

Whereas, it is the policy of Michigan Blue Cross/Blue Shield to make available legal defense for the consumer in contention or conflict with the participating and other providers of health care; therefore be it

RESOLVED: That the Michigan State Medical Society follow this example by setting up a legal defense fund by continuing yearly voluntary contributions of $25.00 by its interested members; the administration and the individual apportioning to be available on the recommendation of the contributing member's component county society and The Council.

• RESOLUTION 75A-27

Dual Membership of the Michigan Blue Cross/Blue Shield Board & The Council of Michigan State Medical Society

House Action: No Action

Whereas, in the past year there has been no progress in resolving the differences between the Michigan State Medical Society and Michigan Blue Cross/Blue Shield; therefore be it

RESOLVED: That the Michigan State Medical Society request that members of The Council, who are also members of the Blue Cross/Blue Shield Board, resign from one or the other avoiding any conflict of interests.

• RESOLUTION 75A-28

Federal Funding for PSRO

Robert C. Packer, MD, Muskegon County

House Action: Disapproved

Whereas, there is insufficient federal financing available to fully fund the PSRO program in Michigan, and

Whereas, the initiation of new PSRO programs in the face of insufficient funding is not in the best interest of the members of MSMS; therefore be it

RESOLVED: That The Council of the MSMS which approved of and sought funds for the PSRO Support Center, specifically apprise all members of MSMS of the true financial situation of the PSRO program in Michigan and, furthermore, to advise each member not to join his area PSRO until full funding is available and on hand.

• RESOLUTION 75A-29

PSRO Support Centers

Robert C. Packer, MD, Muskegon County

House Action: Adopted as Amended

Whereas, it already is evident that there is insufficient federal funding to support the PSRO program in this state; therefore be it

RESOLVED: That the Ad Hoc Committee on Peer Review Systems advise all PSRO Steering Committees and the PSRO Support Center that Articles of Incorporation are to specifically state that all PSRO activities required by governmental agencies must be fully funded by those agencies.

• RESOLUTION 75A-30

Medical Liability Insurance

Robert C. Packer, MD, Muskegon County

House Action: Substitute Resolution (in lieu of 75A-19, 75A-22, 75A-30, 75A-31, 75A-33, 75A-34 and 75A-40) Adopted. See 75A-19.

• RESOLUTION 75A-31

Clarification of Statute of Limitations

Kornelius Van Goor, MD, Kent County

House Action: Substitute Resolution (in lieu of 75A-19, 75A-22, 75A-30, 75A-31, 75A-33, 75A-34 and 75A-40) Adopted. See 75A-19

• RESOLUTION 75A-32

Opposition to Government Sponsored Health Insurance and Rejection of Same Without Inclusion of Medical Liability Coverage

R. Jack Chase, MD, Kent County

THIS RESOLUTION WAS WITHDRAWN ON APRIL 9, 1975

• RESOLUTION 75A-33

Opposition to Government Control of Malpractice Insurance

Harvey M. Andre, MD, Kent County

House Action: Substitute Resolution (in lieu of 75A-19, 75A-22, 75A-30, 75A-31, 75A-33, 75A-34 and 75A-40) Adopted. See 75A-19.

• RESOLUTION 75A-34

Amendment to Recommendation 26, Dively-Demlow Report to Governor Milliken

Fred C. Brace, MD, Kent County

House Action: Substitute Resolution (in lieu of 75A-19, 75A-22, 75A-30, 75A-31, 75A-33, 75A-34 and 75A-40) Adopted. See 75A-19.

• RESOLUTION 75A-35

Payment of Costs for Frivolous and Unsubstantiated Claims

Jack G. Lukens, MD, Kent County

House Action: Substitute Resolution (in lieu of 75A-6, 75A-13 and 75A-35) Adopted. See 75A-6

• RESOLUTION 75A-36

Quality Control of Independent Laboratories

Gerald H. Mandell, MD, Wayne County

House Action: Adopted as Amended

Whereas, there is great concern about the quality of laboratory services performed in private laboratories; and

Whereas, quality control both in the submission of specimens and in the laboratory determinations is frequently lacking; and

Whereas, there is uneconomical and inefficient performance of many procedures bordering on unethical practice in poorly supervised laboratories; therefore be it

RESOLVED: That MSMS work closely with the Michigan Department of Health to upgrade and enforce existing guidelines for proper quality control of independent laboratories.

• RESOLUTION 75A-37

Professional Organizations

Gerald H. Mandell, MD, Wayne County

House Action: Adopted as Amended

Whereas, problems often arise concerning patient records and notification of patients in dissolution of a professional corporation or separation of directors and physician employees for such an organization, and

Whereas, it is essential that patients not be neglected, inconvenienced or receive less than optimal or timely care because of such problems, therefore be it

RESOLVED: That MSMS through its publications urge all members who are members of a professional corporation or who are developing such corporations to include in the Articles of Incorporation and Bylaws an agreement as to procedures which should be followed for patient notification and transfer of records in cases of dissolution or separation of directors or employees.

• RESOLUTION 75A-38

Abortion Referral Service

Gerald H. Mandell, MD, Wayne County

House Action: Adopted as Amended

Whereas, there is a continuing need for an informed public concerning the availability of abortions, and

Whereas, there are a variety of referral agencies and individuals who participate in providing relevant abortion information to the public, and

Whereas, there is demonstrable profiteering by some abortion referral services, therefore be it

RESOLVED: That MSMS ask the Attorney General of the State of Michigan to investigate abortion referral services for possible violations and recommend methods for regulation.

• RESOLUTION 75A-39

Compensation to Physicians for Review Activities

Gerald H. Mandell, MD, Wayne County

House Action: Adopted as Amended

Whereas, physicians are now obligated by law to review the medical care of patients in hospitals, and

Whereas, P.L. 92-603 and the regulations thereto provide that the Department of Health, Education, and Welfare will reimburse an organization for expenses reasonably incurred to carry out these review requirements; therefore be it

RESOLVED: That the Michigan State Medical Society take appropriate action to assure that Michigan physicians will be adequately compensated for their services on hospital utilization review comittees, and that this policy be transmitted to the Michigan Hospital Association.

• RESOLUTION 75A-40

Immunity from Suit for Damages for Communications re Qualifications or Fitness of Physicians

Gerald H. Mandell, MD, Wayne County

House Action: Substitute Resolution (in lieu of 75A-19, 75A-22, 75A-30, 75A-31, 75A-33, 75A-34 and 75A-40) Adopted. See 75A-19.

• RESOLUTION 75A-41

Acceptance By Insurance Carriers of Medical Liability Cost

Gerald H. Mandell,MD, Wayne County

House Action: Adopted

Whereas, the premiums for professional liability protection have increased as much as 400% since 1969, and

Whereas, the burden of medical liability with sharply increased litigation and increasingly higher awards has become a community issue, and

Whereas, the physician is no longer able to pass along these extraordinary premiums due to fixed charge programs of the prepayment carriers, and

Whereas, provision has been made for the hospitals to pass along their mounting liability premiums to the prepayment carriers, and

Whereas, the premium level is becoming prohibitive to the providers of medical services, resulting in

1. Limitation of services to patients with unavoidable risk
2. Discourages physicians entering into the delivery system at the service level
3. Discourages groups of physicians from accepting associates who have recently finished their training; therefore be it

RESOLVED: That the Michigan State Medical Society urge all carriers accept as a medical cost their pro rate share of the physicians' liability premium and increases as they occur; and be it further

RESOLVED: That the Michigan State Medical Society instruct the appropriate liaison committee of this policy; and be it further

RESOLVED: That this policy be actively negotiated and implemented with the principle carriers including the Social Security Administration and the Michigan Department of Social Services.

• RESOLUTION 75A-42

Michigan Medicaid Co-Insurance Program
Donald N. Fitch, MD, Delta-Schoolcraft County

House Action: Adopted as Amended

Whereas, in spite of the admonitions and protestations of organized medicine, some form of National Health Insurance, i.e. socialized medicine, appears to be inevitable in the not too distant future, and

Whereas, in many of the countries in which socialized medicine has been instituted, the results have been disappointing to the profession, the public, or both, and

Whereas, it would seem evident that some control of patient entry is a necessary item to limit otherwise runaway costs, and

Whereas, in such a system a reasonably small front end deductible would appear to be an effective means of accomplishing this goal, and

Whereas, the Michigan Department of Social Services is attempting a pilot program to effect this type of system in their management of the Title XIX Medicaid in Michigan, and

Whereas, implementation of this requires the State to secure an exemption to the provision of the Title XIX Law that prohibits any cost to be borne by the consumer-patient under Medicaid, and

Whereas, the MDSS would still be bearing the entire cost through an allowance to the patient who would then have to decide how to spend this, i.e. on medical care or other necessities or pleasures; therefore be it

RESOLVED: That the Michigan State Medical Society emphatically and enthusiastically suppport this pilot program, and be it further

RESOLVED: That the MSMS notify any and all State and Federal agencies concerned by this program of our support of it.

• RESOLUTION 75A-43

Federal Subsidy of Health Insurance
D. Bonta Hiscoe, MD, Ingham County

House Action: No Action

Whereas, the unemployment rate today nationally is high (8.2%), and in our state is even higher, and

Whereas, many of the unemployed will be without health care protection during their unemployment; therefore be it

RESOLVED: That MSMS support the concept of federal subsidy for the health insurance of those not protected during their unemployment.

• RESOLUTION 75A-44

Limited Work Stoppage
D. Bonta Hiscoe, MD, Ingham County

House Action: Substitute Resolution (in lieu of 75A-44, 75A-56 and 75A-57) Disapproved

RESOLVED: The House of Delegates authorize The Council of MSMS to call a work or paper stoppage of 24 hours to 7 days if present proposed legislation to ameliorate the malpractice crisis is not accomplished to the satisfaction of The Council, and be it further

RESOLVED: That the MSMS plan carefully so that no patient with a potential or real emergency or any special problem be denied needed care.

• RESOLUTION 75A-45

MSMS Sponsored Liability Insurance Company
Alvin Bonzelaar, MD, Ottawa County

House Action: Adopted as Amended

Whereas, the Ottawa County Medical Society recognized that in order to assure availability of professional liability insurance to its members, the Michigan State Medical Society may necessarily sponsor its own mutual insurance company, and

Whereas, the Ottawa County Medical Society considers this to be a temporary emergency measure which should not interfere with continued efforts to legislatively improve the medical liability climate in the State of Michigan; therefore be it

RESOLVED: That MSMS strongly recommends that in computing premium payments, any insurance program give consideration to the type of medicine being performed and the geographic location of the physician.

• RESOLUTION 75A-46

Contingency Fee Legislation
Kenneth H. Musson, MD, Grand Traverse-Leelanau-Benzie County

House Action: Substitution Resolution (in lieu of A-21 and 75A-46) Adopted. See 75A-21

• RESOLUTION 75A-47

Funding of a Medical Malpractice Insurance Fund
Edward E. Elder, Jr., MD, Oakland County

House Action: Adopted as Amended

Whereas, many doctors of medicine are unable to obtain malpractice insurance, or, if obtainable, only at great cost, and

Whereas, Recommendation Number One of the Daniel Demlow report requests a statute to establish a Medical Malpractice Fund, and

Whereas, that Fund would apparently be funded by levies against all doctors, and there might be additional assessments, and

Whereas, it is for the benefit of the public that all doctors have such insurance; therefore be it

RESOLVED: That this House of Delegates go on record in favor of the use of funds of the State of Michigan to defray excessive costs borne by the physicians who participate in the "Medical Malpractice Insurance Fund" as proposed in Recommendation Number One by Daniel Demlow, if necessary, and be it further

RESOLVED: That The Council be instructed to consider a class action suit on behalf of MSMS against the State of Michigan if and when assessments are made against physicians who are not participating in the Michigan Malpractice Insurance Fund, and be it further

RESOLVED: That this resolution should be submitted to Governor Milliken, to the Insurance Bureau, and to the appropriate legislative committees.

• RESOLUTION 75A-48

Exclusive Use of Licensure Fees by The State Board

James A. Read, MD, Oakland County

House Action: Substitute Resolution (in lieu of 75A-48 and 75A-52) Adopted

RESOLVED: That the Michigan State Medical Society Legislative Liaison Committee request the Michigan State Legislature reserve all licensure fees paid by allopathic and osteopathic physicians for exclusive use of their respective Medical Practice Boards.

• RESOLUTION 75A-49

Mandatory Membership in MSMS for Licensure

Richard L. Rapport, MD, Genesee County

House Action: Disapproved

Whereas, participation in the affairs of organized medicine is a basic first step for all physicians in defense of professional freedom, and

Whereas, efforts to preserve the features of free enterprise American medicine will best be served by a unified profession, and

Whereas, physicians should be united in a common dedication to freedom from counterproductive control by extrinsic, non-medical influences, and

Whereas, there exists an increasing need for the medical profession to embrace its responsibilities in the delivery of high quality medical care, and

Whereas, solidarity is the sine que non of competent and earnest peer review; therefore be it

RESOLVED: That the Michigan State Medical Society recommend action, either by legislation or regulation, to require membership in the Michigan State Medical Society and a local component medical society as mandatory to holding a license to practice medicine in the State of Michigan.

• RESOLUTION 75A-50

House of Delegates Meeting Schedule

Arthur A. Ulmer, MD, Wayne County

House Action: Adopted as Amended

Whereas, there are increasing demands on the physicians' time, and

Whereas, the work load and commitments of physicians are heaviest on week days, and

Whereas, it is essential that delegates participate fully in the meetings of the House of Delegates; therefore be it

RESOLVED: That the 1976 or 1977 meeting of the House of Delegates be scheduled on a weekend with the opening session on Friday, this to be a one year trial and continued if desired by vote of the House at the next year's meeting.

• RESOLUTION 75A-51

PSRO

Robert C. Packer, MD, Muskegon County

House Action: Disapproved

Whereas, the PSRO Support Center continues to work toward initiation of area PSROs in the face of insufficient funding, and

Whereas, the proposal of the Support Center to act as an interim administrative and recruitment center for insufficiently funded PSROs is clearly not in the best interest of the membership of MSMS but rather is a proposal to perpetuate the viability of the Support Center itself; therefore be it

RESOLVED: That The Council be directed to withdraw its support of the present PSRO Support Center.

• RESOLUTION 75A-52

Medical & Osteopathic Licensure Fees

Alvin Bonzelaar, MD, Ottawa County

House Action: Substitute Resolution (in lieu of 75A-48 and 75A-52) Adopted See 75A-48

• RESOLUTION 75A-53

A Michigan Medical Protective Association

Brooker L. Masters, MD, Newaygo County

House Action: Referred to MSMS Council for study

Whereas, the professional liability crisis has focused attention upon the vulnerability of the free practice of medicine to outside forces, and

Whereas, the role of the public and/or the consumer in all professions will continue to expand in the future, and the highest quality medical practice demands a freedom of thought possible only when the physician is monitored by his peers, and

Whereas, expanded public relations to protect the public and our profession from misunderstandings and unwarranted allegations would certainly improve the climate in which quality medical care is delivered, and

Whereas, the Michigan State Medical Society's own mutual insurance company will require a public and professional review mechanism, and

Whereas, such professional review would be much more effective and economical than any governmental PSRO activity, and

Whereas, such a Michigan Medical Protective Association would be designed as the public arm of the MSMS; therefore be it

RESOLVED: That the House of Delegates of MSMS hereby authorizes the creation of a Michigan Medical Protective Association to serve the public and the profession in all ethical, monitoring and fee adjudications, as might be spelled out in the bylaws of such Medical Protective Association, and be it further

RESOLVED: That The Council of MSMS be authorized to develop the Constitution and Bylaws of such Michigan Medical Protective Association so that they might be submitted to the 1976 House of Delegates for approval and implementation.

• RESOLUTION 75A-54

Funding a Michigan Medical Protective Association

Brooker L. Masters, MD, Newaygo County

House Action: Referred to MSMS Council for study

Whereas, the creation of a Michigan Medical Protective Association is in the best interests of both the public and the medical profession; therefore be it

RESOLVED: That the House of Delegates of the Michigan State Medical Society authorizes the assessment of an appropriate fee as determined by the Finance Committee, in consultation with the House of Delegates, to implement and support the creation of this Michigan Medical Protective Association.

• RESOLUTION 75A-55

Referendum Campaign to Resolve Professional Liability Problem

David J. Millard, MD, VanBuren County

House Action: Referred to MSMS Council for Study

Whereas, the problem of medical malpractice insurance coverage and abuse of the courtroom system has finally become a public issue, and

Whereas, the Legislature has been in session since January 9 and no progress has been made on the visceral issues, and

Whereas, the public appears to be strongly on the doctors' side; therefore be it

RESOLVED: That unless the Legislature, the Supreme Court and the Governor's office resolve the problem by June 1, that MSMS prepare for a referendum campaign to put on the next general election ballot the MSMS program to resolve the professional liability problem, and be it further

RESOLVED: That The Council is authorized to levy necessary assessment against members of MSMS to finance a referendum campaign.

• RESOLUTION 75A-56

Reaction if Malpractice Progress is Inadequate

Paul L. Trump, MD, Dickinson-Iron County

House Action: Substitute Resolution (in lieu of 75A-44, 75A-56 and 75A-57) Disapproved. See 75A-44

• RESOLUTION 75A-57

State-Wide Action if the Legislative Package is Inadequate

Richard C. Hausler, MD, Saginaw County

House Action: Substitute Resolution (in lieu of 75A-44, 75A-56 and 75A-57) Disapproved. See 75A-44.

• RESOLUTION 75A-58

Outstanding Health Service Award

Louis E. Heideman, MD, Wayne County

House Action: Adopted

Whereas, it has been the custom of the Michigan State Medical Society to recognize outstanding service in the promotion of health, and

Whereas, a member of the Staff of the Wayne County Medical Society gave 38 years of meritorious service to that Society and to the Michigan State Medical Society in increasing our effectiveness in service to the people of Wayne County and of the State, and

Whereas, her individual efforts have facilitated the procurement of health care and resolution of issues to a multitude of patients, and

Whereas, her services have come to an untimely end by her death, therefore be it

RESOLVED: That the Outstanding Health Service Award be awarded to Else Kolhede, posthumously, in recognition of her effective, unstinting and untiring services to the members of the Wayne County Medical Society and to the Michigan State Medical Society, to her wisdom and patience in helping to meet the needs of our patients and to her behind the scenes wisdom in helping shape the programs of the medical profession.

• RESOLUTION 75A-59

Public Responsibility in Professional Liability Insurance Crisis

Reference Committee "A" — Harold F. Falls, MD, Chairman

House Action: Adopted as Amended

Whereas, the public responsibility and role in the resolution of this state's "malpractice liability" crisis continues unabetted; therefore be it

RESOLVED: That the State of Michigan Legislature continue to recognize this public responsibility by speedily enacting comprehensive legislation now before it as requested by MSMS and constantly monitored by The Council of MSMS.

Special Memberships

The Reference Committee on Special Memberships, Richard Hausler, MD, CHairman, recommended approval of the following special memberships as recommended by the component medical societies and certified by the secretary of MSMS in accordance with the Bylaws.

22. RETIRED MEMBERSHIPS – members who have maintained membership for 10 years in the component medical society and retired from active practice.

Alpena County – William F. Jackson, MD
Bay-Arenac-Iosco County – Gayland L. Hagelshaw, MD, Harris L. Woodborne, MD, Alois L. Ziliak, Jr., MD
Chippewa-Mackinac County – Marie A. Hagele, MD
Genesee County – Kenneth W. A. McLeod, MD, Donald W. McNaughton, MD, J. Mott Rawlings, MD, John M. Schwartz, MD
Ingham County – Henry Malcolm, MD, Richard C. Melick, MD
Jackson County – H. K. Filip, MD
Kalamazoo County – William G. Birch, MD, Harold M. Pritchard, MD
Kent County – J. Russell Brink, MD, Louise F. Schnute, MD, Garrett E. Winter, MD
Macomb County – Anna Lublin, MD, George E. Roth, MD
Mason County – Charles A. Paukstis, MD
Mecosta-Osceola-Lake County – Jack Bruggema, MD
Muskegon County – Henry W. Clapp, MD, Emil M. Shebesta, MD, James L. Gillard, MD
Oakland County – Wellington C. Gibson, MD, Arnold B. Newcomb, MD, Harold A. Ott, MD, Joseph J. Ruva, MD, John C. Stageman, MD
Ottawa County – Bernadine DeValois, MD
Saginaw County – Lawrence A. LaPorte, MD
St. Clair County – Joseph F. Beer, MD
Washtenaw County – Edward R. Doezema, MD, Harold F. Falls, MD, Elizabeth J. Rich, MD
Wayne County – Frank T. Balaga, MD, Max Blaine, MD, Robert T. Burns, MD, Hilda B. Case, MD, Paul E. Derleth, MD, Loris M. Hotchkiss, MD, Morris M. Kazdan, MD, Maurice B. Landers, MD, Robert P. Lytle, MD, Lacy John Salan, MD, Donald R. Simmons, MD, Leonard H. Stern, MD, Irene T.S. Suen, MD, Malcolm J. J. Tear, MD, H. L. Tremain, MD, Horace L. Weston, MD.

23. LIFE MEMBERSHIPS – members who have maintained membership for 25 years in a constituent state society of the American Medical Association with five years in Michigan and have either obtained the age of 70 or been in practice 50 years.

Barry County – Raymond G. Finnie, MD
Bay-Arenac-Iosco County – Neal R. Moore, MD
Berrien County – Edwin R. Irgens, MD, T. Scott Moore, MD
Calhoun County – Arthur A. Humphrey, MD
Dickinson-Iron County – Willis H. Huron, MD, R.C. Retallack, MD, D. Roemer Smith, MD
Genesee County – Carl H. White, MD
Ingham County – Edmund J. Robson, MD, Perry C. Spencer, MD, Frederick W. Tamblyn, MD
Kalamazoo County – Harvey C. Bodmer, MD, James G. Malone, MD, Don Marshall, MD, Matthew Peelen, MD
Kent County – Donald Chandler, MD, Mark W. Dick, MD, Ralph L. Fitts, MD, Stephen Hollander, MD, Henry J. Kreulen, MD, William L. Rodgers, MD, Henry J. Van Duine, MD
Macomb County – John A. Engels, MD, Edward K. Isbey, MD
Muskegon County – Frank Diskin, MD
Oakland County – Alexander S. Z. Budd, MD, Thomas H. Cobb, MD
Ottawa County – Johannes D. Plekker, MD
St. Joseph County – Roscoe J. Fortner, MD
Washtenaw County – Karl D. Malcolm, MD, Gordon J. Prout, MD, Charles J. Westover, MD
Wayne County – John G. Arent, MD, Meyer S. Ascher, MD, Matthew A. Balcerski, MD, Carlton F. Brown, MD, Louis Carbone, MD, Meyer J. Elman, MD, Ira E. Falk, MD, Maurice D. Gollman, MD, Lewis Green, MD, Grove A. Jaeger, MD, Ruth M. Kraft, MD, Conrad R. Lam, MD, Thomas B. Marvil, MD, Lester E. McCullough, MD, Albert W. Nickels, MD, Clara Raven, MD, C. F. Schroeder, MD, Maurice M. Silverman, MD, Henry Small, MD, Milton J. Steinhardt, MD, Nelson M. Taylor, MD, Harry Weisberg, MD, John H. Welch, MD, A. Allen Weisberg, MD, Martha L. Wells, MD, Arthur A. Wittenberg, MD.

THE HOUSE adopted the report of the Reference Committee.

Presentations And Awards

24. FIFTY YEAR AWARDS

President Brooker L. Masters, MD, presented the Fifty Year Awards to:

A. Robert Bauer, MD, Wayne County
Abraham M. Bookstein, MD, Wayne County
Ethel T. Calhoun, MD, Oakland County
Leo J. Croll, MD, Wayne County
John M. Dorsey, MD, Wayne County
Isadore H. Gutow, MD, Genesee County
Robert F. Hague, MD, Genesee County
Rose E. Herrold, MD, Wayne County
Philip J. Howard, MD, Wayne County
Roland E. Kalmbach, MD, Ingham County
Edith Hall Kent, MD, Ingham County
Francis X. Krynicki, MD, Wayne County
Edward D. Maire, MD, Wayne County
Oliver McGillicuddy, MD, Ingham County
Maurice P. Meyers, MD, Wayne County
J. Duane Miller, MD, Kent County
Lloyd H. Spencer, MD, Oakland County
Hector J. St. Amour, MD, Wayne County
Floyd H. Steinman, MD, Genesee County
Thaddeus Stokfisz, MD, Wayne County

Fifty Year Awards subsequently were presented to the following doctors who were unable to attend:

Moe Baumer, MD, Wayne County
Virginia M. Benson, MD, Wayne County
John R. Birch, MD, Wayne County
J. Lewis Dill, MD, Wayne County

John V. Fopeano, MD, Kalamazoo County
Ely W. Harelik, MD, Wayne County
William D. Irwin, MD, Kalamazoo County
Vernon P. Johnson, MD, Wayne County
Francis J. McEvoy, MD, Oakland County
R. J. Mendelssohn, MD, Wayne County
Clarence D. Moll, MD, Wayne County
Reed M. Nesbit, MD, Washtenaw County
Galen B. Ohmart, MD, Wayne County
Hayden D. Palmer, MD, Oakland County
Harry A. Paysner, MD, Wayne County
Junius M. Rawlings, MD, Genesee County
Charles J. Scavarda, MD, Genesee County
Theophile E. Schmidt, MD, Jackson County
Robert J. Schneck, MD, Wayne County
Homer H. Stryker, MD, Kalamazoo County

25. EMPLOYEE AWARDS

Secretary Kenneth H. Johnson, MD, presented the following employee awards as previously authorized by the House of Delegates:

Warren F. Tryloff— 20 years of service
Sherry L. Hall — 5 years of service
Sherry L. Decker— 5 years of service
Lenora M. Evey — 5 years of service

Elections

The House of Delegates elected the following MSMS Officers, Councilors, and American Medical Association Delegates and Alternate Delegates:

OFFICERS (to 1976 Annual Session)

President-Elect	*Robert M. Leitch, MD, Battle Creek*
Secretary	*Kenneth H. Johnson, MD, Lansing*
Treasurer	*John R. Ylvisaker, MD, Pontiac*
Assistant Secretary	*David Siegel, MD, Lansing*
Assistant Treasurer	*Ernest P. Griffin, Jr., MD, Flint*
Speaker of the House	*Vernon V. Bass, MD, Saginaw*
Vice Speaker of the House	*James D. Fryfogle, MD, Southfield*

COUNCILORS (to 1978 Annual Session)

1st District	*Louis R. Zako, MD, Dearborn Heights*
3rd District	*S. A. Yannitelli, MD, Battle Creek**
**(to fill unexpired term to 1976 Annual Session)*	
7th District	*James H. Tisdel, MD, Port Huron*
8th District	*William A. DeYoung, MD, Saginaw*
10th District	*Robert C. Prophater, MD, Bay City*
12th District	*Busharat Ahmad, MD, Marquette*
15th District	*Thomas J. Setter, MD, Mount Clemens*

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION (Jan. 1, 1975 through Dec. 31, 1976)

Donald N. Sweeny, Jr., MD, Detroit
John J. Coury, MD, Port Huron
George W. Slagle, MD, Battle Creek
James C. Danforth, Jr., MD, Grosse Pte Woods

ALTERNATE DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION (Jan. 1, 1975 through Dec. 31, 1976) – (In order of seniority)

Vernon V. Bass, MD, Saginaw
Marjorie Peebles Meyer, MD, Detroit
Kenneth J. Ray, MD, Grosse Ile
Robert C. Prophater, MD, Bay City

REFERENCE COMMITTEES, 1975 ANNUAL SESSION

COMMITTEE "A"

Harold F. Falls, MD, Washtenaw, Chairman
Harvey M. Andre, MD, Kent
John C. Benson, MD, Genesee
Thomas C. Blair, MD, Ingham
Donald N. Fitch, MD, Delta
Thomas M. Flake, MD, Wayne
Gerald H. Mandell, MD, Wayne

Councilor Advisors:

Robert M. Leitch, MD, Calhoun
Brooker L. Masters, MD, Newaygo

COMMITTEE "B"

S.A. Yannitelli, MD, Calhoun, Chairman
Joseph H. Caruso, MD, Ob-Gyn
Ned I. Chalat, MD, Wayne
Worth W. Henderson, MD, Pediatrics
Henry A. Kallet, MD, Jackson
George H. Koepke, MD, Washtenaw
John Quin, Jr., MD, Genesee

Councilor Advisors:

John J. Coury, MD, St. Clair
Leland E. Holly, II, MD, Muskegon

Paul T. Lahti, MD, Oakland
W. Kaye Locklin, MD, Kalamazoo

COMMITTEE "C"

Alvin Bonzelaar, MD, Ottawa,Chairman
Ray A. Gagliardi, MD, Radiology
Nanette J. Jagnow, MD, Oakland
Earl G. Moehn, MD, Macomb
Kenneth H. Musson, MD, Grand Traverse
George Porretta, MD, Wayne
Aaron K. Warren, MD, Cass

Councilor Advisors:

Noyes L. Avery, Jr., MD, Kent
Benjamin Jeffries, MD, Wayne
James H. Tisdel, MD, St. Clair

COMMITTEE "D"

Richard C. Deming, MD, Jackson, Chairman
Dwight J. Dutcher, MD, Wayne
Donald D. Finlayson, MD, Chippewa
John W. Grigg, MD, Bay
Joseph LaHood, MD, Macomb
Conrad R. Lam, MD, Wayne
Jack G. Lukens, MD, Kent

Councilor Advisors:

Donald T. Anderson, MD, Dickinson
Louis E. Heideman, MD, Wayne
Marion G. McCall, Jr., MD, Wayne

COMMITTEE "E"

Arthur A. Ulmer, MD, Wayne, Chairman
Thomas A. Barton, MD, Livingston
Richard H. Gascoigne, MD, Lenawee
Orville Oughtred, MD, Macomb
Homer M. Smathers, MD, Wayne
Robert D. Swedenburg, MD, Muskegon
Harry Tarpinian, MD, Wayne

Councilor Advisors:

Ralph R. Cooper, MD, Wayne
Adam C. McClay, MD, Grand Traverse
Robert C. Prophater, MD, Bay City
Sydney Scher, MD, Macomb

COMMITTEE "F"

D. Bonta Hiscoe, MD, Ingham County
Eduardo Arciniegas, MD, Wayne
Walter L. Howland, MD, Bay
Andrew D. Hunt, MD, MSU Dean
Clarence S. Livingood, MD, Wayne
James A. Read, MD, Oakland
Lewis E. Simoni, MD, Genesee

Councilor Advisors:

William A. DeYoung, MD, Saginaw
Donato F. Sarapo, MD, Lenawee
Louis R. Zako, MD, Wayne

CREDENTIALS & TELLERS

Robert D. Allaben, MD, Wayne, Chairman
Charles E. Conaway, MD, Lapeer
Arthur F. Dundon, MD, Grand Traverse
Eli J. Igna, MD, Wayne
William B. Jensen, MD, Anesthesiology
Karin Tansek, MSU, SAMA
George M. Wilson, Jr., MD, Marquette

SPECIAL MEMBERSHIPS

Richard Hausler, MD, Saginaw, Chairman
Jaime V. Aragones, MD, Oakland
Peter M. Eisenfeld, U of M, SAMA
Robert J. Fisher, MD, Washtenaw
William H. Salot, MD, Wayne

RULES & ORDER OF BUSINESS

John W. Moses, MD, Wayne, Chairman
Richard D. Anslow, MD, Wayne
Thomas R. Berglund, MD, Kalamazoo
Edward E. Elder, MD, Oakland
Charles L. Oppy, MD, North Central
Robert J. Toteff, MD, Saginaw
Daniel J. Wilhelm, MD, Wayne

CONSTITUTION & BYLAWS

David J. Millard, MD, Van Buren, Chairman
F. C. O'Dell, MD, Alpena
Kenneth J. Ray, MD, Wayne
Wm. F. Sutter, MD, Mason
Bernard J. Sweeney, MD, Internal Med.
James R. Quinn, MD, Oakland, Advisor
Lee B. Stevenson, MD, Wayne, Advisor
A. Stewart Kerr, ex officio
Warren F. Tryloff, ex officio

Councilor Advisor:

Robert M. Stow, MD, Ingham

WAYS & MEANS

William Haeck, MD, Kent, Chairman
Dean P. Carron, MD, Washtenaw
Sidney E. Chapin, MD, Wayne
James C. Danforth, MD, Wayne
John H. McLaughlin, MD, Oakland
David Siegel, MD, Ingham
Charles H. Willison, MD, Midland

Councilor Advisors:

Ernest P. Griffin, Jr., MD, Genesee
John R. Ylvisaker, MD, Oakland

1975 MSMS HOUSE OF DELEGATES RECORD OF ATTENDANCE

	Meetings			
	1st	2nd	3rd	4th
OFFICERS:				
Speaker: Vernon V. Bass, MD	x	x	x	x
Vice Speaker: James D. Fryfogle, MD	x	x	x	x
Secretary: Kenneth H. Johnson, MD	x	x	x	x
DELEGATES & ALTERNATES:				
ALLEGAN				
Van O. Keeler, MD	x	x	x	x
ALPENA-ALCONA-PRESQUE ISLE				
F. C. O'Dell, MD	x	x	x	x

BARRY				
David M. Woodliff, MD	x	x	x	x
BAY-ARENAC-IOSCO				
John W. Grigg, MD	x	x	x	x
Walter L. Howland, MD	x	x	x	x
BERRIEN				
F. Alan Kennedy, MD	x	x	x	x
Fredk. H. Lindenfeld, MD	x	x	x	x
BRANCH				
Malcolm B. Steider, MD	x	x	x	—
CALHOUN				
S. A. Yannitelli, MD	x	x	x	x
Walter B. Long, MD	x	x	x	x
William D. Walters, MD	x	x	x	x
CASS				
Not Represented				
CHIPPEWA-MACKINAC				
Donald D. Finlayson, MD	x	x	x	x
CLINTON				
James M. Grost, MD	x	x	x	x
DELTA-SCHOOLCRAFT				
Donald N. Fitch, MD	x	x	x	x
DICKINSON-IRON				
Paul L. Trump, MD	x	x	x	x
EATON				
Eber B. Sherman, MD	x	x	x	x
GENESEE				
John C. Benson, MD	x	x	x	x
Charles A. Thompson, MD	x	x	x	—
Richard L. Rapport, MD	x	x	x	x
Lewis E. Simoni, MD	x	—	—	x
John Quin, Jr., MD	x	x	x	x
Robert C. Davis, MD	—	—	x	x
Phyllis O. Helcher, MD	—	—	x	—
James F. Dooley, MD	x	x	—	—
GOGEBIC				
Not Represented				
GRAND TRAVERSE-LEELANAU-BENZIE				
Arthur F. Dundon, MD	x	x	x	x
Kenneth H. Musson, MD	x	x	x	x
GRATIOT				
Not Represented				
HILLSDALE				
Clark B. Smith, MD	x	x	x	x
HOUGHTON-BARAGA-KEWEENAW				
Paul G. Goodreau, MD	x	x	—	x
HURON				
K. B. Herrington, MD	x	x	x	—
INGHAM				
Harry C. George	x	x	x	x
Thomas C. Payne, MD	x	x	x	x
George D. Stilwill, MD	x	x	x	x
David Siegel, MD	x	x	x	—
Thomas C. Blair, MD	x	x	x	x
D. Bonta Hiscoe, MD	x	x	x	x
Justin L. Sleight, MD	x	x	x	x
IONIA-MONTCALM				
Robert E. Rice, MD	x	x	x	x

ISABELLA-CLARE				
John M. Wood, MD	x	x	x	x
JACKSON				
Richard C. Deming, MD	x	x	x	x
Henry A. Kallet, MD	x	x	x	x
KALAMAZOO				
Robert H. Grekin, MD	x	x	x	x
Robert C. Kettunen, MD	x	x	x	x
Harold R. Reames, MD	x	x	x	x
Thomas R. Berglund, MD	x	x	x	x
Konrads V. Lubavs, MD	x	x	x	x
B. David Wilson, MD	x	x	x	x
KENT				
Jack G. Lukens, MD	—	x	x	x
Kornelius VanGoor, MD	x	x	x	x
William E. Kincaid, MD	x	x	x	x
Harvey M. Andre, MD	x	x	x	x
Robert D. Burton, MD	x	x	x	x
Fred C. Brace, MD	x	x	x	x
William Haeck, MD	x	x	x	x
Joseph R. Lentini, MD	x	x	x	x
Richard A. Rasmussen, MD	x	x	x	x
Gordon L. Bartek, MD	x	x	x	x
Robert J. Chase, MD	x	x	x	x
Larry J. Robson, MD	x	—	—	—
LAPEER				
Charles E. Conaway, MD	x	x	x	—
LENAWEE				
Richard H. Gascoigne, MD	x	x	—	x
LIVINGSTON				
Thomas A. Barton, MD	x	x	x	—
LUCE				
Not Represented				
MACOMB				
Orville W. Oughtred, MD	x	x	x	x
William C. Wyte, MD	x	x	x	x
Leland C. Brown, MD	—	—	x	x
Dario DePaulis, MD	x	x	x	x
Joseph J. LaHood, MD	x	x	—	—
Thomas J. Setter, MD	x	x	x	x
MANISTEE				
Vickers C. Hansen, MD	x	x	x	x
MARQUETTE-ALGER				
George M. Wilson, MD	x	x	x	x
MASON				
William F. Sutter, MD	x	x	x	x
MECOSTA-OSCEOLA-LAKE				
Jerial A. Beard, MD	x	x	x	x
MENOMINEE				
William S. Jones, Jr., MD	x	x	x	x
MIDLAND				
Charles H. Willison, MD	x	x	x	x
MONROE				
S. Newton Kelso, MD	x	x	x	x
MUSKEGON				
Donald K. Crandall, MD	—	—	x	x
Robert C. Packer, MD	x	x	x	x
Robert D. Swedenburg, MD	x	x	x	x
NEWAYGO				
Robert E. Paxton, MD	x	x	x	x

NORTH CENTRAL				
Charles L. Oppy, MD	x	x	x	x
NORTHERN MICHIGAN				
H. Ross Hume, MD	x	x	x	x
OAKLAND				
Jaime V. Aragones, MD	x	x	x	x
E. William Bauer, MD	—	x	x	—
Arnold L. Brown, MD	x	x	x	x
John B. Bryan, MD	—	x	x	—
Fred W. Bryant, MD	x	—	—	—
Gerald F. Conway, MD	x	x	x	x
Paul D. Croissant, MD	x	x	—	x
Peter A. Duhamel, MD	x	x	x	x
Edward E. Elder, Jr., MD	x	x	x	x
Keith M. Holmes, MD	x	x	x	x
Nanette J. Jagnow, MD	x	x	x	x
Frederick V. Minkow, MD	x	—	x	x
John H. McLaughlin, MD	x	x	—	x
James A. Read, MD	x	x	x	x
Kenneth L. Urwiller, MD	x	x	x	x
Bruce H. MacPherson, MD	x	x	—	x
OCEANA				
John J. Vrbanac, MD	x	x	x	x
ONTONAGON				
Not Represented				
OTTAWA				
Alvin Bonzelaar, MD	x	x	x	x
Lloyd S. Rotz, MD	x	x	x	—
SAGINAW				
Robert J. Toteff, MD	x	x	x	x
Robert Jardinico, MD	x	x	x	x
Richard C. Hausler, MD	x	x	x	x
Duane B. Heilbronn, MD	x	x	x	x
ST. CLAIR				
Daniel J. Wilhelm, MD	x	x	x	x
James J. Snider, MD	x	x	x	x
ST. JOSEPH				
Robert H. Evans, MD	x	x	x	x
SANILAC				
Keate T. McGunegle, MD	x	x	—	—
SHIAWASSEE				
Henry T. Forsyth, MD	x	x	x	x
TUSCOLA				
Herbert L. Nigg, MD	x	x	x	—
VAN BUREN				
David J. Millard, MD	x	x	x	x
WASHTENAW				
Dean P. Carron, MD	x	x	x	x
Harold F. Falls, MD	x	x	x	x
Robert J. Fisher, MD	x	x	x	x
George H. Koepke, MD	x	x	x	x
Beverly C. Payne, MD	x	x	x	—
Joseph J. Tiziani, MD	—	—	x	—
Leonard H. Wolin, MD	x	—	—	—
Roger W. Postmus, MD	x	—	—	—
Rhoda M. Powsner, MD	x	x	x	x
Carl Van Appledorn, MD	x	x	x	x
WAYNE				
Arthur A. Ulmer, MD	x	x	x	—
Sidney E. Chapin, MD	x	x	x	x
James D. Fryfogle, MD	x	x	x	x
Donald N. Sweeny, Jr., MD	x	x	x	x
Homer M. Smathers, MD	x	x	x	x
Sidney Adler, MD	x	—	—	—
William H. Blodgett, MD	x	x	x	x
James C. Danforth, Jr., MD	x	x	x	x
Marjorie P. Meyers, MD	x	x	x	x
Alexander Blain, III, MD	x	x	—	—
Edward J. Tallant, MD	x	x	x	x
John W. Moses, MD	x	x	—	x
C. Jackson France, MD	x	x	x	—
Robert D. Allaben, MD	x	x	x	x
George Mogill, MD	x	x	—	—
Richard D. Anslow, MD	x	—	x	x
Francis P. Rhoades, MD	x	x	x	x
Clarence S. Livingood, MD	x	—	x	—
Arthur Z. Ostrowski, MD	—	x	x	—
Thomas M. Flake, MD	x	x	—	—
Conrad R. Lam, MD	x	x	x	—
Milton R. Weed, MD	x	x	x	x
George F. Porretta, MD	x	x	x	x
Raymond B. Bauer, MD	x	x	x	—
Abraham Becker, MD	x	x	x	x
Vincent J. Gallant, MD	x	x	x	—
Frank B. Walker, MD	x	x	x	x
Kenneth J. Ray, MD	x	—	—	x
Henry M. Domzalski, MD	x	x	x	—
Herbert J. Robb, MD	x	x	—	x
Eli J. Igna, MD	x	x	x	x
Carl A. Gagliardi, MD	x	—	x	x
Dwight J. Dutcher, MD	—	x	x	x
William H. Salot, MD	x	—	—	—
Louis W. Kaufman,·MD	x	x	x	x
Donald C. Austin, MD	x	—	—	—
Norman Bolton, MD	x	x	—	—
Samuel D. Jacobson, MD	x	x	x	x
Gerald H. Mandell, MD	x	x	x	x
Paul E. Ruble, MD	x	—	x	—
Paul R. Dumke, MD	x	x	x	x
Paul M. Zavell, MD	—	x	—	x
Gomer P. Evans, MD	x	x	x	x
James J. Humes, MD	—	x	x	x
Robert D. Larsen, MD	—	x	—	x
Michael N. Zelenock, MD	x	x	x	x
Harry Tarpinian, MD	x	x	x	x
Louis F. Hayes, MD	x	x	x	x
Andrew J. Hopkins, MD	x	x	x	x
Earl J. Rudner, MD	—	x	—	—
Charles Kessler, MD	x	x	—	—
Robert A. Songe, MD	x	x	x	x
Robert P. Lilly, MD	x	x	x	x
Richard R. Royer, MD	x	x	x	x
Donald L. Baltz, MD	x	x	x	—
Herbert Rosenbaum, MD	x	—	—	x
David Jacknow, MD	x	x	x	x
WEXFORD-MISSAUKEE				
Dennis E. Van Alst, MD	x	x	x	x

American Student Medical Association Delegates

MSU				
Karin Tansek	x	x	x	—
WSU				
William DuBois	x	x	x	x
U of M				
Not Represented				

Members At Large

Medical School Deans

MSU				
Andrew D. Hunt, Jr., MD	—	x	—	—
WSU				
Not Represented				

U of M				
Not Represented				
IMMED. PAST PRESIDENT				
John J. Coury, Jr., MD	x	x	x	x

Section Delegates

ALLERGY & APPLIED IMMUNOLOGY				
James A. McLean, MD	x	x	x	x
ANESTHESIOLOGY				
Wm. B. Jensen, Jr., MD	x	x	x	x
CLINICAL PHARMACOLOGY & THERAPEUTICS				
Robert L. Tupper, MD	—	x	—	—
DERMATOLOGY				
Not Represented				
GASTROENTEROLOGY				
Not Represented				
FAMILY PRACTICE				
Not Represented				
INTERNAL MEDICINE				
Bernard J. Sweeney, MD	x	x	x	x
NEUROLOGY				
Mark C. Levine, MD	—	x	x	x
NEUROLOGICAL SURGERY				
Fredric M. Somach, MD	x	x	x	x
OBSTETRICS-GYNECOLOGY				
Joseph A. Caruso, MD	x	x	x	x
OCCUPATIONAL MEDICINE				
Not Represented				
OPHTHALMOLOGY				
William D. Knapp, MD	—	—	x	—
ORTHOPEDIC SURGERY				
Hira E. Branch, MD	—	—	x	x
OTOLARYNGOLOGY				
Not Represented				
PATHOLOGY				
Edwin M. Knights, Jr., MD	x	x	x	x
PEDIATRICS				
Worth W. Henderson, MD	x	x	x	x
PHYSICAL MEDICINE AND REHABILITATION				
Myron M. LaBan, MD	x	—	—	—
PLASTIC SURGERY				
Don G. Davis, MD	—	x	—	—
PROCTOLOGY				
Timothy M. Talbott, MD	x	x	x	x
PSYCHIATRY				
Not Represented				
PUBLIC HEALTH & PREVENTIVE MEDICINE				
Not Represented				
RADIOLOGY				
Raymond A. Gagliardi, MD	x	x	x	x
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respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

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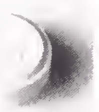

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surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

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Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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President's Page

MDs Supporting MPMLC for Many Reasons

Vernon V. Bass, MD
President, MPMLC

For this month's page, I've asked Vernon V. Bass, MD, president of our Michigan Physicians Mutual Liability Company, to act as guest author. All of us with MSMS are anxious to see our company become operational for the many benefits we foresee from it for Michigan physicians. Doctor Bass's message follows. – Brock E. Brush, MD, MSMS president

In the last few days, I've had the opportunity to talk with some of the many MSMS members buying $1,000 surplus certificates to help capitalize our Michigan Physicians Mutual Liability Company.

Their reasons for purchasing the certificates are truly varied and interesting. Here's why some of them are buying:

Thomas R. Burglund, MD, Kalamazoo, MDPAC chairman — "All six members of our PC bought certificates. All of us feel that with our own company we can have better control and better information as to who is being sued and why. We believe a company run by physicians, for physicians, is going to do better."

George W. Koepke, MD, Ann Arbor, AMA section alternate delegate — "I consider my purchase a benevolent act for organized medicine. I think those of us in academic medicine and surgery have to appreciate and get behind the efforts of organized medicine and support the physicians of tomorrow — our students."

Richard L. Rapport, MD, Flint, MSMS delegate – "The MPMLC is our only salvation. And it's economically sound, too. It just might end up being a good investment. Also, I'm worried there might not be any other insurance companies available in the next couple years."

Robert M. Stow, MD, Lansing, MSMS councilor — "I'm very satisfied with Medical Protective, but I need the new company badly to keep insurance available for neurosurgeons, orthopods and ob-gyns to stay in the community. Without them I'm sunk. If we get pressed, I may purchase another certificate."

Frederick W. Weissman, MD, Detroit, former chairman, MSMS insurance committee — "I think formation of a new company is important to help stimulate a more favorable litigation or legal climate in Michigan. And the more doctors band together the better it is for the profession and public."

S. A. Yannitelli, MD, MSMS councilor — "I purchased a certificate for the future security of being able to obtain good malpractice insurance at a reasonable price and at the same time to maintain good control over the doctors who abuse the system."

There are many good reasons for MSMS members to purchase a MPMLC surplus certificate. It is imperative that we purchase certificates now to get the company capitalized so we can issue policies to the physicians who need and want coverage now.

Let me again urge you to read your prospectus and send in your contribution. The address is the Michigan Physicians Mutual Liability Company, PO Box 1471, East Lansing, 48823.

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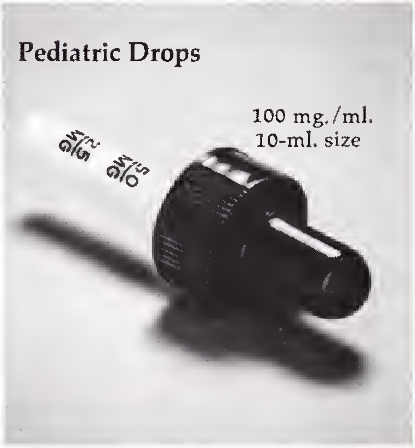

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Neck and Shoulder Pain

Presenting Symptoms of Carpal Tunnel Syndrome

By Myron M. LaBan, MD, FACP
Gregory A. Zemenick, MD
Joseph R. Meerschaert, MD
Royal Oak

Carpal tunnel syndrome, initially described by Marie and Foix in 1913, has only recently been recognized as the most frequent nerve entrapment syndrome of the upper extremity. The alert clinician should have little difficulty in recognizing this syndrome when the characteristic symptom complex of paresthesias, numbness and pain are present in the wrist, thumb, index and long fingers. Usually the complaints are worse at night, arousing the patient from a sound sleep, and exacerbated by activity requiring sustained grasp.

Shoulder and neck pain with minimal hand and wrist complaints can also be a presenting symptom of median nerve compression within the carpal canal. Its frequency of occurrence remains debated: a 15 percent incidence is described by Crymble[1], while Phalen[2] states that the association is an "unusual" one. There is little disagreement that an unrecognized carpal tunnel syndrome presenting as severe shoulder pain can produce marked disability, delayed diagnosis and inappropriate medical or surgical therapy.

The presence of "obvious" clinical or roentgenographic evidence of local pathology such as cervical and/or acromioclavicular joint arthritis, subdeltoid bursitis and/or thoracic outlet syndrome, makes an immediate, definite diagnosis often a difficult one, even for a sophisticated examiner. However, when suspected, the clinical impression of carpal tunnel syndrome should always be substantiated by electrodiagnostic studies, including electromyography and nerve conduction measurements over the distal segments of the nerve.

Methods

The 22 patients in this present series were initially referred during a one-year interval, for physical treatment of neck and shoulder pain. None was suspected of having a carpal tunnel syndrome by primary physicians. All were successfully treated by surgical lysis of the carpal ligament.

The patient group ranged in age from 36 to 67 years with a mean age of 52, and was evenly divided between males and females. With the exception of two cases, all patients complained of pain in their dominant upper extremity. Each patient, prior to referral, had received extensive clinical and x-ray evaluation. All had received some form of medical care, including physical, pharmacological and, in two cases, surgical treatment.

In our laboratory, a thorough neurological and musculoskeletal evaluation always preceded an electrodiagnostic evaluation. The electromyographic examination of the involved extremity and adjacent paraspinous muscles was performed using a monopolar electrode. All of the patients had electromyographic abnormalities confined to the thenar muscles innervated by the median nerve distal to the carpal ligament. The presence of fibrillation potentials in the resting thenar muscle group and a marked loss of voluntary motor units with active muscle contraction suggested partial median nerve denervation in eight cases.

Doctor LaBan and Doctor Meerschaert are with the Division of Physical Medicine and Rehabilitation, William Beaumont Hospital, while Doctor Zemenick is with the Division of Orthopedics.

Scientific Articles

The articles on this and succeeding pages have been contributed by physicians at William Beaumont Hospital, Royal Oak, and comprise a special scientific section. The August issue of* Michigan Medicine *also carried articles from Beaumont Hospital.

Nerve conduction studies, included both percutaneous motor testing and, on occasion, sensory testing of appropriate extremity peripheral nerves. A prolonged median nerve terminal conduction delay through the carpal tunnel was confirmed when the delay exceeded 4.5 milliseconds. This value was always compared to that of the uninvolved side.

Additional studies, including antidromic median nerve sensory delays and therapeutic injections of steroid into the carpal canal, also were helpful in confirming the diagnosis.

The presence of an underlying generalized neuropathy with slowing of conduction velocity over the entire distribution of the median nerve was excluded in all cases by conduction values exceeding 50.0 meters per second.

When conservative medical measures, including hand and wrist splinting, injectable steroids, rest and diuretics, had failed, the patients were referred for surgical release of the carpal ligament.

Discussion

The most frequent causes of shoulder and neck pain are those primarily of intrinsic pathology related to local tissue and/or skeletal abnormalities. Extrinsic pathology from remote sources can also produce neck and shoulder pain. To the more familiar entities of subdiaphragmatic irritation and angina pectoris can be added carpal tunnel syndrome.

Our year of experience concurs with that of Kummel[3] who concluded that "shoulder pain caused by carpal tunnel syndrome is not infrequent at all."

Isolated compromise of a peripheral nerve can and often does produce retrograde pain radiation to proximal structures innervated by the nerve. If the proximal complaint is severe enough, the distal site of pain can be overlooked.

In all 22 cases in this series, we were able, with classical clinical testing for the carpal tunnel syndrome, to demonstrate the primary symptom complex. All had thenar muscle weakness in the involved muscle extremity, a positive wrist percussion test over the median nerve and increase in proximal arm and shoulder pain with wrist hyperextension and flexion. A diagnostic trial of treatment using carpal tunnel steroid injection was frequently accompanied by a temporary but marked increase in the shoulder pain complaints.

Five patients complained of diminished but continuing discomfort following carpal tunnel release. In each instance the complaint was alleviated by a program of heavy overhead intermittent cervical traction. Each patient had x-ray evidence of degenerative disc disease at cervical interspace C5-6 with foramenal encroachment. Prior to surgery the symptoms had failed to respond to similar therapy. Apparently, in these cases, distal compromise of the median nerve in the carpal canal served to provoke and aggravate a concurrent problem of cervical spondylosis with C6 radiculopathy. The C6 root is a major contributor to both the motor and sensory fibers of the median nerve.

Cervical radiculopathy, primarily C6, can initally present with dysesthesias in the thumb. The "numb thumb syndrome" can mimic the symptoms of primary carpal tunnel syndrome with variable degrees of shoulder and neck pain. A key differential point between the two entities is the presence, in cervical radiculopathy, of a pattern of muscle weakness in the proximal myotome distribution of the C6 root and the prompt relief of symptoms, pain initially and dysesthesias later, with heavy overhead intermittent cervical traction.

In the evaluation of this patient series, the electrodiagnostic studies were invaluable. Often they were the only objective evidence to support our clinical impression of carpal tunnel syndrome. Prolonged motor and sensory median nerve conduction delays through the carpal ligament were proven, at surgery, to be reliable indicators of the presence of nerve compression within the carpal canal. Of the two procedures, sensory delays when prolonged or absent have proven to be the earliest and most sensitive indicator of local nerve dysfunction.

Electromyographic examination complemented the prolonged conduction delays through the carpal canal in eight of the 22 cases. Moderate to severe electromyographic abnormalities were present in the median nerve innervated muscles of the thenar eminence. Although only supporting the diagnosis of carpal tunnel syndrome in one-third of the cases, the electromyograph proved most valuable in excluding other sources of more proximal nerve compromise.

Electrodiagnostic studies, although playing a major role in the accurate diagnosis of carpal tunnel syndrome with predominant symptoms of shoulder and neck pain, should remain as an adjunct to the clinical impressions of an alert clincian.

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Thrombocytopenia and Renal Failure

By Gerald S. Weintraub, MD
Jay Bernstein, MD
Royal Oak

This 80-year-old, white male was transferred from another hospital for evaluation and treatment of renal failure.

He had been in good health until two months prior to admission when he began to complain of vague abdominal discomfort. He had undergone an uneventful right inguinal herniorrhaphy two months before. One month prior to admission he complained of weakness, fatigue, dizziness, and peripheral edema. He had no headaches, shortness of breath or diarrhea. His appetite was allegedly good, although he had lost 30 pounds during the two to three months prior to admission. An upper gastrointestinal series, a barium enema, an excretory urogram and a sigmoidoscopic examination had all been normal.

Two weeks before admission, he was hospitalized elsewhere because of progressive weakness and tiredness. His blood count and serum urea nitrogen concentration were normal; urinalysis revealed microhemeturia. He was treated with Negram® and Dyazide®. He also developed symptoms of congestive heart failure and an arrhythmia, for which he was treated with digoxin and procaine amide. Shortly thereafter he was noted to have petechiae, a questionably palpable spleen and a platelet count of 60,000 per cubic millimeter. His other medications were discontinued and he was given prednisone, 60 mgm/day. Subsequently, he became oliguric and progressively more drowsy. His BUN rose to 100 mgm per 100 ml; and his serum creatinine from its initial level of 2.8 to 3.6 mgm per 100 ml. His hemoglobin fell to 8.2 gm per 100 ml.; his platelets decreased to 35,000 per cubic millimeters. A bone marrow aspiration was done and was reported as normal. The urine output during the 24 hours prior to transfer was 600 ml. per day, despite an intravenous intake of more than two liters.

Physical Examination

Blood pressure: 140/70 mm Hg, Temperature: 37° C. The patient was comatose with slow respirations at 6/minute. There were petechiae over the entire body. The pupils were small and equal; cataracts were seen. There were several superficial retinal hemorrhages seen in both eyes. The jugular veins were not distended. Examination of the lungs and heart was negative. Ascites was present; liver and spleen edges were questionably palpable. No evidence of localizing neurologic deficit was found.

Hospital Course

Peritoneal dialysis and corticosteroid therapy were begun immediately after admission. The dialysis was discontinued 48 hours later, when the patient could follow simple commands. He was treated with penicillin, given initially as 20 million units over 12 hours and subsequently, as five million units intravenously every 12 hours.

On the second day his heart rate rose to 130 per minute and a short systolic murmur was heard; digitalization was started. His white count rose to 15,000 per cu.mm., his hemoglobin stabilized at nine gm per 100 ml, and his platelet count rose to 32,000 per cubic millimeter. Following the discontinuation of dialysis, his mentation progressively deteriorated and he became obtunded. Mild clonic jerks and irregular slow respirations were observed. The tachycardia persisted. Four days following admission the patient expried.

Discussion

This case, entitled "Thrombocytopenia and Renal Failure", presents a rather complex clinical problem. I will briefly review the protocol and comment on some of the details as we go along. An 80-year-old man is transferred to this hospital because of renal failure of relatively brief duration. He was said to have been in good health until about two months prior to admission, having had an uneventful herniorrhaphy three months before admission. His first symptoms were vague abdominal discomfort, followed in one month by weakness, fatigue, dizziness and peripheral edema. Significant weight loss occurred despite fluid retention. It is important to note that an intravenous urogram was normal one month prior to admission, suggesting that renal function was not impaired. Two weeks prior to admission, CBC and BUN were normal. However, microhematuria was found.

This is our first important finding. In view of subsequent events, one should question whether thrombocytopenia was already present and related to the drugs Negram® and Dyazide®. Thereafter, the tempo of events accelerated. Congestive

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Doctor Weintraub is vice-chief of the Department of Medicine, while Doctor Bernstein is chief, Department of Anatomic Pathology, both at William Beaumont Hospital, Royal Oak.

Laboratory Findings

CBC: Hemoglobin 8.7 gm per 100 ml.
Hematocrit 26.3 vol %.
Red blood count 2.81 million per cu. mm.
MCV 92 cubic microns, MCH 31 micromicrograms.
White blood count 6,200 per cu. mm. with 15 bands, 78 PMN, 6 lymphocytes, 1 monocyte; platelet count 11,000 per cu. mm.
No schistocytes, no polychromatophilia on smear.
Reticulocyte count 2.3%.

Urinalysis: 2-3+ protein; innumerable RBC's, 1 granular cast per low power field, occasional red cell casts, no bacteria.

Chemistry: sodium 127 mEq/L, potassium 6.7 mEq/L, chloride 102 mEq/L, CO_2 19 mEq/L, BUN 126 mgm per 100 ml, creatinine 7.4 mgm per 100 ml, bilirubin 3.1 mgm per 100 ml, SGOT 48 milliunits per ml., LDH 280 milliunits per ml; alkaline phosphatase 1000 milliunits/ml I.U., repeat preheat 730 milliunits/ml., postheat 670 milliunits/ml, total protein 4.9 grams per 100 ml; albumin 2.7 grams per 100 ml; calcium 7.7 mgm per 100 ml, phosphorus 5.0 mgm per 100 ml; glucose 140 mgm per 100 ml, cholesterol 100 mgm per 100 ml; uric acid 12 mgm per 100 ml.

Hematologic Studies: Prothrombin time 12.0 seconds patient, 12.0 seconds control; partial thromboplastin time 35.0 seconds, 34.0 seconds control; fibrinogen 205 mgm per 100 ml; 245 mgm per 100 ml; euglobulin lysis time greater than 180 minutes; para-coagulation tests negative; ethanol gelation test negative; Coombs test was negative; plasma hemoglobin was 2.5 mgm tive; plasma hemoglobin was 2.5 mgm per 100 ml; haptoglobin was 13 mgm per 100 ml.

Arterial gases: pH 7.32, pCO_2 48 mm, pO_2 100 mm, and O_2 saturation 90%.

Ascitic fluid: specific gravity 1.012; RBC 2,000 per cu. mm; WBC 40 per cu. mm and protein concentration of 0.7 grams per 100 ml.

Miscellaneous Studies: ASO titer was 50 Todd units; rheumatoid factor by latex fixation was positive, 1:640; cryoglobulins were negative.

Blood cultures × 2 were positive for enterococci which were sensitive to all the antibiotics tested.

Electrocardiogram: first degree a-v block and ST-T changes, compatible with subendocardial changes and/or digitalis effect.

heart failure and arrhythmias ensued. Does this represent a primary cardiac event or the consequence of volume overload? Digitalis and procaine amide were administered. Petechiae, splenomegaly and thrombocytopenia were noted. We are not told why prednisone was given at that time. Oliguria and azotemia appeared rather rapidly. The hemoglobin fell in the absence of apparent blood loss or hemolysis. Upon transfer to William Beaumont Hospital, the patient was apparently in extremis. Blood pressure: 140/70 mm Hg; temperature: 37° C. Petechiae were widespread; retinal hemorrhages were found; ascites and hepatosplenomegaly were present. There were no localizing neurologic findings.

The laboratory data are extensive and may be difficult to interrelate. A moderately severe normocytic normochromic anemia was present; white blood count was normal with a neutrophilia; platelets were profoundly depressed at 11,000 per cu. mm.; no schistocytes or polychromatophilia were seen. The urinalysis revealed 2-3+ proteinuria, red cell casts, red calls, and granular casts, certainly suggesting glomerular disease. The azotemia, acidosis, hyperuricemia and mild impairment in carbohydrate tolerance are anticipated findings in renal failure. The total protein was low at 4.9 gm% with a modest reduction in serum albumin at 2.7 gm% (certainly not in the range one would expect with the nephrotic syndrome). The marked elevation in heat stable alkaline phosphatase suggests hepatic origin. The ASO titer of 50 units is against the usual post streptococcal glomerulonephritis. The significant titer of rheumatoid factor (1:640) will be considered later.

Extensive coagulation studies were done and are for the most part unrevealing. The normal euglobulin lysis time argues against primary fibrinolysis. Paracoagulation tests and ethanol gelation tests are screening tests for fibrin monomers. If positive, they suggest that thrombin has acted on fibrinogen. They are the initial steps in the laboratory investigation of suspected disseminated intravascular coagulation and positive data would lead one to look by other techniques for confirmatory evidence of fibrin split products. I can conclude that at this time there was no overtly demonstrable disseminated intravascular coagulation. The drop in hemoglobin was probably secondary to hemolysis. This is supported by the bilirubin of 3.1 mgm per 100 ml., LDH 280 units, reticulocyte count 2.3%, and haptoglobin of 13 mgm per 100 ml. The Coombs test was negative and plasma hemoglobin normal. The bone marrow was said to be normal. I would have liked to have seen bone marrow confirmation of hemolysis by finding accelerated erythrocytogenesis, but perhaps in the presence of azotemia this response was suppressed. Finally, and the most tantalizing of all the laboratory findings, two blood cultures were positive for enterococcus.

The hospital course was brief with rapid deterioration. Peritoneal dialysis and corticosteroids were instituted with perhaps temporary improvement. The bacteremia was promptly treated with penicillin. A tachycardia and a short systolic murmur were noted (perhaps a significant murmur; perhaps a hemic murmur). A brief hematologic response occurred with increase in white blood cell count and platelet count. Terminally there were clonic jerks, and the patient expired four days after transfer to this hospital.

This problem can be analyzed in three areas; renal failure, thrombocytopenia, and hemolysis. First of all, we do not have evidence for the usual antecedents of acute tubular necrosis, namely toxins, shock, transfusion reactions, etc. I am assuming that the patient did not receive transfusions at the time of his uneventful herniorrhaphy, but I wonder if this 80-year-old man may have required an indwelling catheter in the urinary bladder postoperatively. I am also assuming that there was no evidence of a prostatic carcinoma on physical examination. The urinalysis was compatible with glomerular disease. Oliguria and azotemia progressed over a two-week interval. Blood pressure remained normal. Congestive heart failure may have contributed to the renal insufficiency, but I will postulate that a type of glomerular disease is the major finding in the kidney.

The thrombocytopenia was evidently more than the usual idiopathic thrombocytopenic purpura or drug-induced thrombocytopenia. In the presence of hepatosplenomegaly, one should consider a primary hematologic malignancy, but there is no support for this in the peripheral blood, bone marrow, or lymph nodes. Is there enough evidence for primary chronic liver disease complicated by portal hypertension, ascites, and secondary thrombocytopenia? Again the evidence is meager. With the exception of the marked elevation of the alkaline phosphatase, which is difficult to explain, I find no evidence of hyperglobulinemia, abnormality in prothrombin time or macrocytosis of the red cells. The bilirubin was minimally elevated, but one would find it difficult to defend the diagnosis of primary liver disease terminating in the so called "hepatorenal syndrome." Metastatic carcinoma to the liver or primary carcinoma in the liver could not adequately explain the entire clinical picture. If one assumes the normal bone marrow to be an accurate finding, what has become of the platelets? Peripheral destruction in the spleen or other sites must be the explanation. Bacteremia of a variety of types has been associated with destruction of platelets. In disseminated intravascular coagulation platelets are also consumed.

The third prominent feature in this case is hemolysis, as suggested by the fall in hemoglobin, elevation in bilirubin and reticulocytes, and saturation of haptoglobin. This does not appear to be drug-induced hemolysis or the usual variety of immune hemolytic anemia. Some features of the clinical and laboratory findings suggest paroxysmal nocturnal hemoglobinuria. Abdominal pain is present, but there is no history of venous thromboses. Hemolytic anemia and thrombocytopenia are compatible with paroxysmal nocturnal hemoglobinuria, but there is no mention of hemoglobinuria or hemosiderinuria. Probably paroxysmal nocturnal hemoglobinuria does not fit the picture adequately, but this diagnosis should always be considered in the presence of chronic thrombocytopenia and hemolysis.

The triad of thrombocytopenia, hemolytic anemia, and changing neurologic signs has classically been associated with Moschcowitz's syndrome, or thrombotic thrombocytopenic purpura (TTP). How does this fit our clinical picture? TTP is more common in females and usually occurs in younger patients. Fever, anemia, jaundice, hepatosplenomegaly, cardiac murmurs (often due to nonbacterial endocarditis), and renal insufficiency are all compatible with TTP. The neurologic signs in this case are present, but not really changing. Varying levels of consciousness and terminal myoclonic jerks may be explained by uremia. Do we have adequate laboratory support for this diagnosis? Anemia and thrombocytopenia are present; a more marked reticulocytosis is usually present. The absence of nucleated erythrocytes, spherocytes and fragmented cells weakens the case for TTP. Proteinuria and microhematuria are compatible with this diagnosis. Coagulation studies are often normal. Bone marrow sections may demonstrate hyaline thrombi in half the cases. Our case for TTP is weakened considerably by the laboratory findings. Interestingly, it used to be said that renal involvement in TTP rarely produced acute renal failure, but there have been cases in the literature of actue anuria from TTP. Although this is controversial, the pathophysiology of TTP has been related to the hemolytic-uremic syndrome of childhood. It is postulated that fibrin deposits in the afferent arterioles and glomerular capillaries as the result of intravascular coagulation with secondary red cell fragmentation and hemolysis. Does our patient have an adult hemolytic-uremic syndrome? I think that there is not enough support for this diagnosis, although I find it attractive because some of the mechanisms of fibrin deposition in the microcirculation may prevail.

What about the role of infection as a cause of acute renal failure? Serious infection was the major etiologic factor in one third of the cases of acute renal failure in a large series. Usually it was associated with other factors such as shock, hemolysis, urinary tract obstruction, and nephrotoxic antibiotics. I again speculate about the consequences of an indwelling catheter in this elderly man. In this case, in spite of two positive blood cultures, the clinical picture is not primarily one of overwhelming sepsis. I am going to try to defend a more subtle infectious mechanism to explain the pathophysiology in this case, namely enterococcal endocarditis with secondary glomerulonephritis and renal failure. It is well recognized that bacterial endocarditis can be subtle and lethal in the elderly. We have evidence of a progressive clinical picture characterized by weakness and fatigue, leading to significant cardiac events, congestive heart failure and arrhythmias and terminating in renal failure. Thrombocytopenia has been a feature of classical subacute bacterial endocarditis, particularly in the older literature, although the mechanism is not clear. In the past the nephritis of bacterial endocarditis was thought to be embolic in origin. In the past 10 years the immunologic basis of this nephritis has been established. In addition, it has been found that immune complexes may initiate localized intravascular coagulation within the glomeruli. Both diffuse and focal glomerular lesions have been described. Showers of bacteria in a host hyperimmunized against the bacteria may be analogous to antigen-antibody complexes in antibody excess, with the formation of insoluble complexes that deposit in the glomerulus.

Levy and Hong[1] have eluted antibody from the glomeruli of a patient who died of renal failure from the nephritis of endocarditis. The eluate was shown to combine with bacteria (enterococcus) cultured from the patient's blood. As in this case, elevated titers of rheumatoid factor are frequently observed in subacute bacterial endocarditis. Rheumatoid factor seems to be correlated with high levels of IgG. It is possible that rheumatoid factor represents an immunoglobulin directed against the IgG of the antigen-antibody complex. A renal lesion resembling the nephritis of endocarditis has been described in children with infected ventriculoatrial shunts. Deposits of immunoglobulin and complement have been demonstrated along the glomerular basement membrane. The continuous leak of bacterial antigen from the infected shunt generates antigen-antibody complexes and the resulting glomerulonephritis. The following mechanism has been postulated: the immune complex is deposited along the glomerular basement membrane with complement. Leukocytes are attracted to the area and basement membrane destruction occurs. The exposed basement membrane antigens stimulate the production of anti-glomerular basement membrane antibodies. If one adds the mechanism of localized intravascular coagulation with deposition of fibrin and consumption of platelets, there is a reasonable explanation of the pathophysiology in this case.

In summary: the evidence for enterococcal endocarditis includes the murmur, the congestive heart failure and arrhythmias, and the positive blood cultures. The renal failure with normal blood pressure is compatible with the nephritis of subacute bacterial endocarditis as outlined above. The ascites may be secondary to heart failure, and the elevation in alkaline phosphatase may be secondary to micro-abscesses in the liver or chronic passive congestion (although the marked elevation would be unusual in the latter situation). Anatomically, I would anticipate:

(1) Enterococcal endocarditis of the mitral valve; either normal valve or rheumatic valvulitis.

(2) Emboli to brain and spleen.

(3) Immune-complex glomerulonephritis with fibrin deposition in glomeruli, suggesting local intravascular coagulation.

(4) Chronic passive congestion of the lungs and liver.

Postmortem Findings

Postmortem examination confirmed Doctor Weintraub's analysis. The heart was moderately enlarged with left ventricular hypertrophy. Two, friable, yellow thrombotic masses were attached to the mitral valve near its free edge **(Fig. 1)**. The vegetations contained large clusters of gram-positive cocci, presumably enterococci. Some organization and inflammation were noted at the points of attachment to the valve surface, but there was no evidence either grossly or microscopically of pre-existent scarring or rheumatic disease.

Significant complications were the effects of embolization and sepsis. An area of hemorrhage, 2 × 4 cm, was present in the frontal lobe of the right cerebral hemisphere **(Fig. 2)**, although neither thrombosis nor arteritis could be identified. Focal coronary arteritis was interpreted as the consequence of septic embolization, and there was an irregularly distributed myocarditis. Septic infarcts were present in the spleen and kidneys, and reactive changes were present in the spleen, which was greatly enlarged.

The kidneys were enlarged and the glomeruli mildly hypercellular by virtue of a slight increase in mesangial and epithelial cells **(Fig. 3)**. Endothelial cells were also slightly swollen, but glomerular ischemia was not a uniform feature. The latter were swollen and basophilic, presumably a response to injury of the glomerular capillary wall. Bowman's spaces and tubular lumens frequently contained blood, and tubular lumens also contained proteinaceous precipitate. The glomerular lesion was diffuse; neither focal necrosis nor vasculitis was seen.

A diffuse proliferative glomerulonephritis, while less common than the focal lesion, has been observed in patients with bacterial endocarditis. Recent studies[1,2] have demonstrated that the

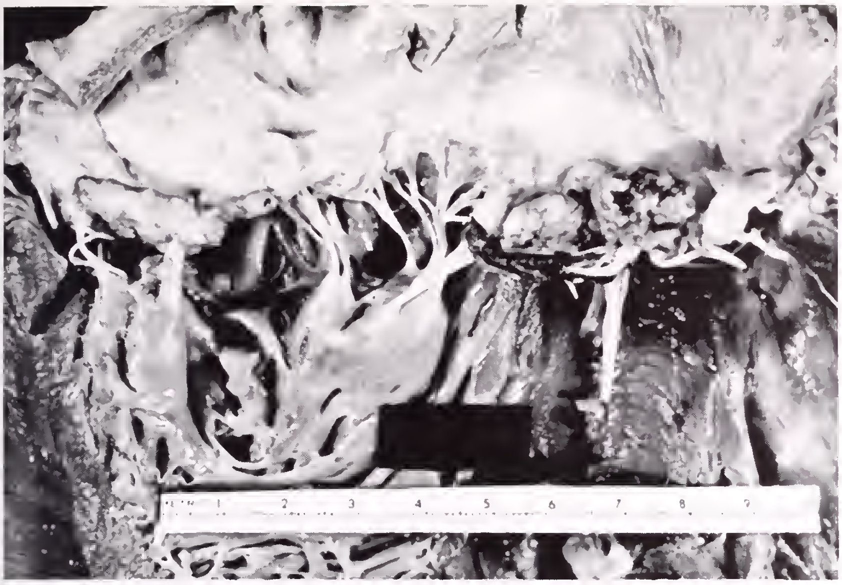

Fig. 1. Two large and friable, yellow thrombotic masses are attached to the free edge of the mitral valve. There is no evidence of rheumatic heart disease or previous valvular scarring. H&E stain. Magn. 250X.

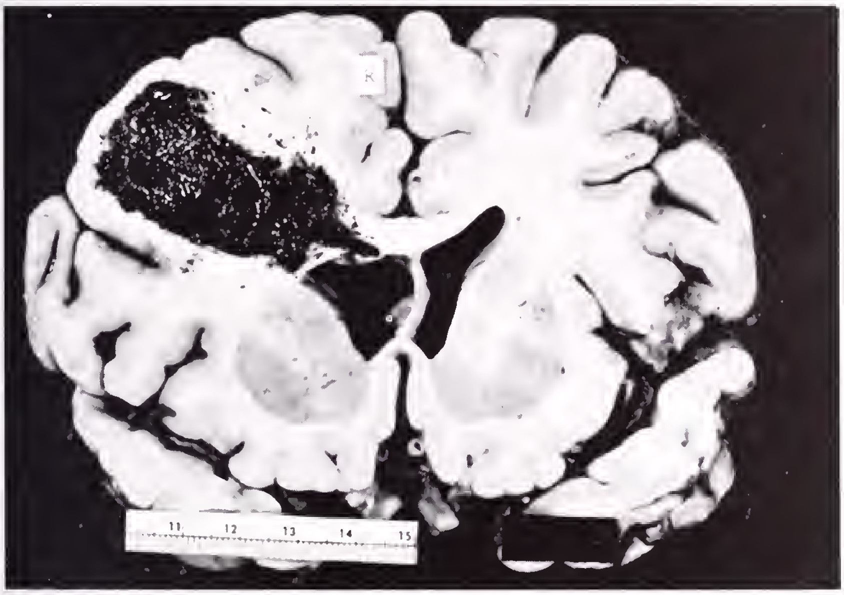

Fig. 2. An area of recent hemorrhage is present in the right frontal lobe of the brain.

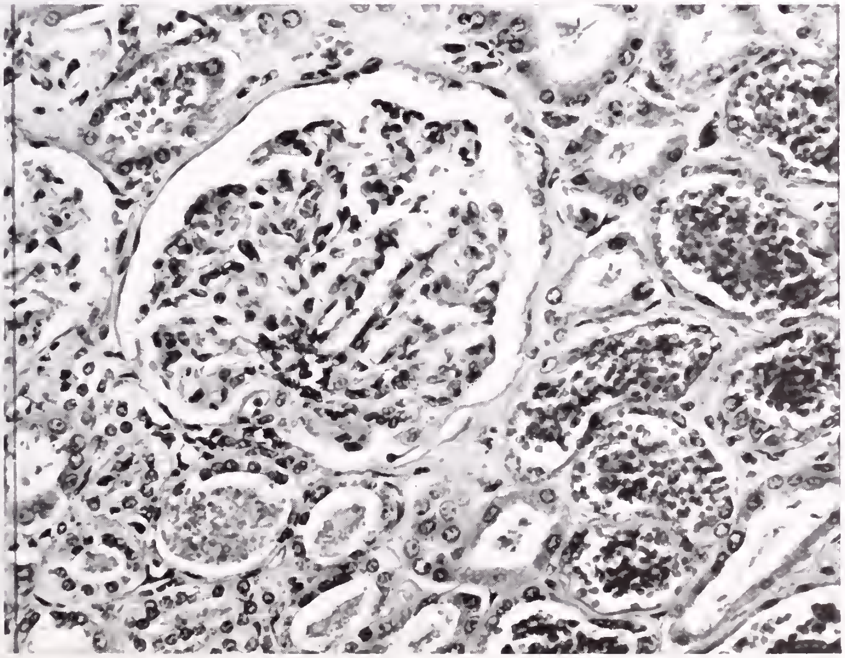

Fig. 3. The glomeruli are mildly hypercellular as a result of mesangial and epithelial cell proliferation. Many tubular lumens contain blood. H&E stain. Magn. 250X.

glomerulonephritis is related to the deposition of immune complexes. Glomerulonephritis abnormalities have been described also in cases of bacterial endocarditis not having clinical renal involvement.[3] The renal complication is not usually severe enough to cause lethal renal failure, and the renal lesion in this case would not be described in histologic terms as "severe." The glomerular lesion was accompanied by only a mild degree of interstitial inflammation, and the extent of renal infarction was not of sufficient severity to account for the patient's difficulty. We must assume, therefore, that he did not die of the renal lesion alone, and must take into account the effects of myocardial inflammation.

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Monthly Surveillance Report

Cases of Certain Diseases
Reported to the Michigan Department of Public Health
For the Five Week Period Ending August 1, 1975

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

	1975 This 5-Week Period	1974 Same 5-Week Period	1975 Total To Above Date	1974 Total Same Date	Total Cases for 1974
Rubella	22	56	1,380	1,147	1,388
Cong. Rubella Syndrome	0	0	1	0	1
Measles	69	66	2,981	1,886	2,365
Whooping Cough	2	23	45	51	104
Diphtheria	0	0	1	0	0
Mumps	148	174	7,918	5,308	7,230
Scarlet Fever & Strep Sore Throat	948	974	15,258	25,064	31,802
Tetanus	0	0	0	1	6
Poliomyelitis (Paralytic)	0	1	0	1	2
Hepatitis	253	315	1,686	2,252	3,599
Salmonellosis (other than S. typhi)	80	101	478	625	1,001
Typhoid Fever (S. typhi)	2	3	4	6	11
Shigellosis	62	150	439	674	1,436
Aseptic Meningitis	18	8	65	63	162
Encephalitis	6	6	45	34	69
Meningococcic Meningitis	3	6	58	34	54
H. Influenza Meningitis	10	13	78	80	121
Tuberculosis	122	126	707	599	1,431
Syphilis	170	231	992	1,741	2,659
Gonorrhea	2,943	2,810	17,963	18,269	32,152

Information can be supplied by the local health department on the local incidence of disease.

Maurice Reizen, M.D., Director
Michigan Department of Public Health

Combination Chemotherapy in the Treatment of Advanced Hodgkin's Disease

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Among a number of independently active agents that have shown antitumor effects in Hodgkin's disease the most effective are the alkylating agents, the vinca alkaloids, vinblastine sulfate and vincristine sulfate, the methylhydrazine derivative, procarbazine, and the corticosteroids[1]. Used singly or sequentially the rate of complete remission is low (between 10% and 20%) and short-lived. The use of effective drugs in combination and manipulations of doses and schedules increased the tumor cell kill or prevented development of drug resistance[2]. Studies on the concurrent use of two or more drugs have shown an increase in the complete remission rate over that induced by single agents[3,4].

In 1969, De Vita et al reported an 80% complete remission rate in Hodgkin's disease by using a combination of nitrogen mustard, vincristine (oncovin), procarbazine, and prednisone (MOPP)[5]. This was described in greater detail in 1970[6]. In this study of 43 previously untreated patients, 35 (81%) achieved a complete remission. The patients were given six courses of the four-drug regimen at one month intervals and treatment was then stopped. The median duration of complete remission was between 29 and 42 months. Eighteen of the 35 relapsed with a median time to relapse of 11 months.

Evaluations of this program followed. The Southwest Cancer Chemotherapy Study Group obtained an overall complete remission rate of 65% in 164 patients. They also showed that patients with little or no previous therapy had a 79% (65/82) complete remission rate that compared favorably with the initial study by the National Cancer Institute. The MOPP regimen could also be used in patients with previous major chemotherapy or radiotherapy (complete remission rate 50%, 41/82). The extrapolated duration of maintained remission (180 weeks) was approximately twice as long as unmaintained remission (95 week). During the one to two-year follow-up period only eight of 35 maintained patients had a relapse, whereas 14 of 33 unmaintained patients had a relapse[7]. A recent expanded study gave a complete remission rate of 66% for 178 patients. The relapse rate was significantly less in the patients with maintained remission. Seventy-five per cent of the maintained patients were in complete remission three years after the start of the study, compared with 46% for the unmaintained patients. Eighty percent of the patients in complete remission were alive at four years and there was no difference between the maintained and unmaintained group[8].

At William Beaumont Hospital the same combination of drugs was given to 32 patients with advanced Hodgkin's disease between November 1969 and November 1973. The results of our preliminary experience with this group of patients entered before September, 1973 are the subject of this report.

Materials and Methods

From November 1969 to November 1973, 32 consecutive patients with advanced Hodgkin's disease were treated. The Rye classification was used in staging the patients seen earlier[9]. A retrospective review of their records enabled a more precise classification to be made using criteria agreed on at the Ann Arbor Conference[10]. These criteria were applied later in the study.

Patient Population

The patients admitted to William Beaumont Hospital came mainly from a wide segment of metropolitan Detroit. These included (1) patients with significant amounts of prior therapy with single agents in multiple doses or sequentially till relapse (these drugs were given before MOPP came into general use) (2) patients who had received local or extensive x-irradiation in the past for earlier stages of their disease and now had relapsed or developed extension into an organ system, (3) patients whose initial workup indicated organ involvement (lung, liver, bone marrow) and classified as stage IV. One patient (J. P.) received the first three courses of MOPP in a

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neighboring hospital after a liver biopsy (at laparotomy for suspected liver abscess) showed Hodgkin's disease.

Pathologic Material

In all patients the histological material was confirmed as Hodgkin's disease by the pathologist of record in the hospital and classified into categories (lymphocyte predominance, nodular sclerosis, mixed cellularity, or lymphocyte depleted) after Lukes and Butler. An exception was made where available slides did not include lymph node tissue (J.P.).

Staging

A history, physical examination, blood counts, liver function tests, and extensive radiologic evaluation were done. This included a PA and lateral chest x-ray, whole lung laminograms, bone survey, intravenous pyelography, and lymphangiography (if the bone marrow biopsy was negative for tumor). Bone marrow biopsies were done routinely. Bone scans were performed on some patients with suspected bone involvement. An exploratory laparotomy was done: (1) for definite pathologic examination of the lymph nodes involved in positive, equivocal, or negative lymphangiograms, (2) with splenectomy and liver biopsy in patients with no bone marrow or lung involvement. Reclassification into advanced stages from earlier localized disease was confirmed by demonstrable organ involvement, e.g. positive bone marrow biopsy, lung x-rays, or liver scans.

Liver: Criteria for diagnosis of Hodgkin's disease of the liver depended on a positive biopsy at laparotomy, abnormal liver function tests (elevated alkaline phosphatase and abnormal BSP retention), hepatomegaly, and abnormal radioisotope hepatic scan.

Lung: Parenchymal lung involvement was diagnosed by biopsy in 2 patients and from routine chest x-rays and whole lung laminograms in the others. In those patients whose lung lesions were not studied histologically before treatment, the improvement with chemotherapy tended to confirm the diagnosis.

Bone marrow: Bone marrow biopsies were obtained in all patients from the posterior iliac crests. Definite bone marrow involvement was diagnosed when Reed-Sternberg cells were seen. Other abnormalities such as lymphoid aggregates and eosinophilic hyperplasia were considered consistent with but not diagnostic of Hodgkin's disease.

Bone: Sclerotic and osteoblastic lesions seen in two patients' bone surveys (D.P. and R.S. respectively) were considered sufficient evidence for bone involvement and no open biopsies were done.

Treatment Program

Chemotherapy consisted of intermittent administration of nitrogen mustard, vincristine sulfate, procarbazine, and prednisone. The treatment was given monthly for six cycles then bimonthly for nine cycles giving a total of 15 courses. Nitrogen mustard and vincristine were given on days 1 and 8 or each cycle as a rapid injection into the tubing of a running IV infusion of normal saline. Nitrogen mustard was given at each injection at a dose of six mg/m² body surface and for vincristine 1.2 mg/m². From days 1 to 10 procarbazine was given 50 mg. P.O. B.I.D. Prednisone was taken orally at a dose of 40 mg/m²/day for 10 days only during cycles 1 and 4 or if fever and sweats were present. After each 10-day treatment period, patients were given no other therapy until the next cycle. Each treatment cycle took approximately four weeks. **Figure 1** shows a single cycle of therapy. Patients started their chemotherapy in the hospital and continued these as outpatients. Premedication for nausea and vomiting with thorazine or compazine was generally given since almost all patients experienced these symptoms. A sliding scale after De Vita **(Table 2)** was used later in the study to reduce the amount of each drug[6]. The patients entering remission continued to receive maintenance therapy every two months for a total of 15 courses. The intervals were lengthened to allow recovery from marrow depression.

Days	1	2-7	8	9-10	11-28
Mustargen IV mg/m² (nitrogen mustard)	6		6		no therapy
Oncovin IV mg/m² (vincristine)	1.2		1.2		
Procarbazine PO mg	100	→	→	→	
Prednisone PO mg/m²	40	→	→	→	

Figure 1. Scheme illustrating 1 cycle of MOPP

If WBC count before starting new course is	Then adjust dosage to
4,000	100% of all drugs
3,999-3,000	100% of vincristine 50% Nitrogen mustard and Procarbazine
2,999-2,000	100% of Vincristine 25% Nitrogen mustard and Procarbazine
1,999-1,000	50% of Vincristine 25% Nitrogen mustard and Procarbazine
999-0	No drug
If platelet count before starting new course is	**Then adjust dosage to**
100,000	100% of all drugs
50,000-100,000	100% Vincristine 25% Nitrogen mustard and Procarbazine
50,000	No drug

Table 2. Dosage attenuation schedule for bone marrow depression

Table 1. Clinical Features and Response to Therapy of 32 patients with advanced Hodgkins's disease.

Patient	Age at onset of Treatment and sex		Clinical Stage	Pathologic Stage	Symptoms	Nodes involved	Organs involved	Histology	Prior Therapy	Laparotomy	Courses	Response	Survival months
1. A.A.	72	F	IV-A	IV-A$_{N+M+H+S+}$	-	C,S	marrow liver	LP	-	-	1	NE	1e
2. M.A.	38	M	III-B	IV-B$_{N+L+}$	F,P	C,Su,I	lung*	MC	total node radiation	-	5	IF	9
3. H.B.	26	F	IV-B	IV-B$_{N+B+S+L+M-}$	F,S,	Su,A,S,R	bone	NS	total node	+	16	PR	33+
4. T.B.	19	M	IV-A	IV−A$_{N+L+M-H-S-}$	-	C,Su,Me	lung	MC	radiation mantle	+	15	CR	31+
5. M.C.	17	M	II-A	III−A$_{N+S+H-}$	-	C,Me, S	-	NS	mantle & inverted Y	+	6	CR	34+
6. P.C.	28	M	IV-B	IV−B$_{N+L+M+}$	F,P	Su,Me	lung marrow	MC	local x-ray, HN$_2$, velban, leukeran	+	6	IF	9e
7. R.D.	28	M	IV-A	IV−A$_{N+M+}$	-	C	marrow	MC	mantle	−	15	CR	32+
8. T.F.	17	M	IV-B	IV-B$_{N+S+L+}$	F,P	C,Su,I,R	lung, kidney, mesentery	MC	mantle	−	11	IF	17+
9. G.G.	62	M	IV-B	IV−B$_{L+M-N-H-H-}$	W	-	lung*	NS	-	−	15	PR	26+
10. C.G.	29	F	III-B	III-B$_{N+S+}$	W	A,S	-	NS	local x-ray	−	15	CR	34+
11. P.H.	9	F	IV-B	IV-B$_{N+S+L+}$	F	C,Me,I,S	lung	NS	mantle inverted Y velban leukeran	+	6	IF	8e
12. M.H.	69	F	IV-B	IV-B$_{M+N+H+S+}$	F	A,Me,S	marrow liver	MC	local x-ray	−	9	CR	12+
13. J.H.	30	M	IV-A	IV-A$_{N+H+S+B+}$	-	C,S	liver* bone	NS	-	+	10	CR	14+
14 L.H.	50	M	IV-B	IV-B$_{N+H+}$	F	C	liver	LD	-	+	3	PR	3e
15. W.J.	70	M	IV-B	IV-B$_{N+L+M-}$	W	Su,A,Me	lungs*	MC	leukeran	−	1	NE	½e
16. M.K.	20	F	III-B	III-B$_{N+S+M-H}$	F,W	Su,Me,S,R	-	NS	HN$_2$	+	5	CR	36+
17. M.L.	41	F	III-A	III-A$_{N+H-M-S}$	-	A,Su,I	-	LP	total nodal radiation	−	11	CR	25+
18. J.L.	40	M	IV-A	IV-A$_{N+M+}$	-	C	marrow	LP	-	-	8	CR	11+
19. D.M.	72	M	IV-B	IV-B$_{L+}$	F	C	lungs	MC	velban leukeran	−	1	NE	0e
20. O.M.	47	F	IV-A	IV-A$_{N+B+H+}$	-	C,Su,Me,S	bones breast	NS	mantle local x-ray	−	2	NE	2e
21. G.N.	61	M	IV-B	IV-B$_{N+S+H+M+}$	F.S. W	A,R,S	liver marrow	MC	mantle HN$_2$, leukeran	−	1	NE	1½e
22. J.P.	27	M	IV-B	IV-B$_{N+H+M+}$	F	A,C,Me	liver marrow	U	-	+	9	PR	11e
23. D.P.	30	M	IV-B	IV-B$_{N+S+M+L+}$	F,S	A,S,R	marrow lung bone	LD	mantle inverted Y	+	8	IF	10e
24. J.R.	25	M	IV-A	IV-A$_{N+H+}$	-	A,C,R	liver rectum	MC	local x-ray	−	2	IF	18e
25. R.L.S.	24	M	IV-B	IV-B$_{N+H+M+B+}$	F,W,	Su,C,A, S,Me	lungs, liver marrow bone	LD	HN$_2$, velban cytoxan vincristine	−	3	IF	3e
26. B.S.	42	F	IV-A	IV-A$_{N+B+H-S-}$	-	Su,R	bone	LP	total nodal radiation	+	15	CR	25+
27. D.T.	20	M	III-B	III-B$_{N+S+H-M-}$	F,W	A,I,R,S	-	MC	mantle inverted Y	+	13	CR	18+
28. L.T.	20	F	IV-B	IV-B$_{N+H+L+M-S-}$	F,W, S	ME,I	liver* lung	NS	mantle & subdiaphr.	+	6	IF	6e

(Table continued next page)

Key to symbols used in table:

Nodes involved:
C = cervical
Su = supraclavicular
Me = mediastinal
R = retroperitoneal
I = inguinal
S = spleen
Il = iliac

Pathologic stage:
N = nodes
M = marrow
B = bone
H = liver
L = lung
E = extranodal

Histology:
LP = lymphocyte predominance
NS = nodular sclerosis
MC = mixed cell
LD = lymphocyte depleted
U = unclassified

Response & Survival
CR = complete remission
PR = partial response
IF = induction failure
e = expired

Symptoms:
F = fever
S = sweats
P = pruritus
W = 10% wt. loss

* = biopsied

Patient	Age at onset of Treatment and sex	Clinical Stage	Pathologic Stage	Symptoms	Nodes involved	Organs involved	Histology	Prior Therapy	Laparotomy	Courses	Response	Survival months
29. P.W.	35 F	IV-B	IV-B_{N+S+E+}	W	S,R	stomach* colon* omentum* L-kidney*	LD	Inverted Y	+	2	IF	3e
30. P.Y.	45 M	IV-B	IV-B_{N+M+}	P,W	Su,Me,R	marrow	LD	mantle HN_2, velban	–	1	NE	0e
31. T.W.	21 M	IV-B	IV-B_{N+M+}	F,S	Su,C,A,R, I,II	marrow	MC	total nodal radiation	+	3	CR	3+
32. D.R.	32 F	IV-B	IV-B_{N+H+M-}	F	Su,C,Me,R	liver	NS	mantle & retroperit radiation	–	6	PR	6+

Patients not considered evaluable included those who were obviously preterminal from the disease (2) or infection (1-generalized herpes zoster), those who received less than two courses (2), or died from unrelated causes (1-subdural hematoma).

A normal physical examination, performance status, laboratory and x-ray studies were required to achieve a complete remission. No post treatment lymphangiograms were done. Partial response was defined as incomplete reduction of measured tumors. Relapse was indicated by recurrence of symptoms, node enlargement, hepatomegaly, or splenomegaly or emergence of organ system involvement. At the end of two or more cycles (mean five-and-a-half) patients were considered induction failures if there were signs of disease progression.

Partial responders who relapsed and induction failures were given cyclophosphamide, adriamycin, dimethyl triazeno imidazole carboxamide, or bleomycin as they became available.

Major prior radiotherapy was defined as treatment with 3000 rads or more to various lymphoid compartments. Treatment with or refractoriness to an alkylating agent, vinca alkaloid, or procarbazine were considered major prior chemotherapy.

Survival figures were tabulated from the beginning of combination chemotherapy.

Results

Thirty-two patients were entered into the study and treated. Of these, 26 were considered evaluable. All patients had a histologic diagnosis of Hodgkin's disease. Thirty-one could be classified according to the Lukes-Butler scheme. Only the slides from a liver biopsy specimen (obtained at laparotomy for a suspected liver abscess) were available on one patient (J.P.) and did not allow classification. A subsequent bone marrow biopsy did demonstrate Reed-Sternberg cells. Details of the patient population are shown in **Table 1.**

Patient Characteristics

The characteristics of the patient population are seen in **Table 3.** The mean age was 30.7 years (9-69). Males outnumbered females 16 to 10. All but five patients were in stage IV with the biggest portion in stage IV-B (15/26). Five of the 10 patients with multiple organ system involvement had biopsy confirmation of Hodgkin's disease in at least one organ. Of seven patients with liver involvement four were confirmed by biopsy. The other three had hepatomegaly as a basis for diagnosis of liver metastasis. Eight patients had lung involvement. Two were biopsied and the others showed parenchymal lung involvement as nodules or infiltrates. Five patients had bone involvement as revealed by positive skeletal films or positive bone scans. Bone marrow infiltration was demonstrated in six with biopsy material.

Survival

The complete remission rate for the 26 evaluable patients was 46% (12). The partial response rate was 23% (5) and 35% (9) were judged induction failures **(Table 5).**

The effect of combination chemotherapy on survival is summarized in **Table 4.** All 12 patients in the group achieving complete remission are living. Eleven are still in their first remission. One patient who received prior radiation and chemotherapy relapsed after seven months, was placed on dimethyl triazeno imidazole carboxamide and is still living (36+ months). The median survival of these 12 patients will be greater than 25 months since not all have completed the full 15 courses of MOPP. The five patients who finished 15 courses of MOPP have a median survival of 32+ months at the time of last follow-up. There was only one unmaintained patient (M.C.). He has survived as long as another maintained patient (C.G., 34+ months). A longer follow-up is needed for these patients in complete remission. None has yet passed the two-year period from the end of treatment when the risk of relapse is highest.

Mean age: 30.7 yrs. (9-69)
Sex distribution: Males-16, Females-10
Stage III-A: 2
III-B: 3
Stage IV-A: 6
IV-B: 15
Multiple organs involved: 10

Lungs	8
Liver	7
Bone	5
Bone marrow	6
GI	3
Kidney	2

Table 3. Characteristics of 26 Evaluable Patients

	Number	Patients still in first remission	Living	Median survival in months
Complete remission	12	11	12	25+
No. who finished 15 courses	5	5	5	32+
Partial response	5	2	2	11
Induction failures	9	-	-	9

Table 4. Effect of Combination Chemotherapy on Survival

The median survival of the partial responders is 11 months. Two expired at three and 11 months from start of chemotherapy. Another moved elsewhere after 33 months. Therapy in one with active disease was changed to bleomycin. Another had a recurrent lung nodule irradiated.

All the induction failures expired within 18 months with a median survival of nine months.

Pretreatment Status

A fairly large proportion of patients (15/16, 58%) had prior major radiotherapy for earlier stages of disease **(Table 5)**. None received prior major chemotherapy alone and six received both modes of treatment. The other five had no previous treatment. The number of samples in each patient group is too small to indicate any definite influence of prior therapy. However, a cooperative study showed that little or no prior treatment and major radiotherapy was associated with a complete remission rate of 73% whereas, those who had received major prior chemotherapy and both major radiotherapy and chemotherapy had a lower complete remission rate of only 30%[8].

Status by Histological Classification

Table 6 shows the response to treatment as related to the histologic classification. Although the entries in each subgroup are small the usual favorable prognosis associated with patients in the lymphocyte predominance and nodular sclerosis group is apparent. Most of the induction failures and expirations are seen in the mixed cell and lymphocyte depleted group.

Toxicity and Tolerated Dose

The qualitative toxicity of each agent in the MOPP regimen is well known. Patients with little or no prior treatment required little or no decrease in the estimated dose (more than 75%) and slightly longer interval between treatments. Prior major radiotherapy or chemotherapy decreased somewhat the doses tolerated (50 to 75%) and to even lower doses (25 to 50%) when the patients previously received both radiation and chemotherapy. During the latter half of the study the dosage attenuation schedule used by De Vita, Serpick, and Carbone was followed[6].

Nausea and vomiting were present in almost all patients treated and tended to be worse after the first course. These were minimized with thorazine or compazine given a quarter to one-half hour earlier. Some patients became so conditioned to expect these side effects that the very sight of the IV needle caused them to retch.

Most patients developed some degree of leukopenia but few developed WBC counts below 2000/cu.mm. One patient (J.P.) had persistent leukopenia below 2000/cu.mm. during the last two

	No. Patients	Prior Major Radiotherapy	Prior Major Chemotherapy	Chemotherapy & Radiotherapy	No Previous Therapy
Complete remission	12 (46%)	9	-	1	2
Partial response	5 (19%)	1	-	1	3
Induction failures	9 (35%)	5	-	4	-
Total	26	15	-	6	5

Table 5. Pretreatment Status and Results of Combination Chemotherapy

	Complete Remission	Partial Response	Induction Failures	Response Continues	Relapsed	Expired	Number Evaluable
LP	3	-	-	2	1	-	3
NS	4	3	2	5	2	2	9
MC	5	-	4	5	-	4	9
LD	-	1	3	-	-	4	4
Unclass.	-	1	-	-	-	1	1
Total	12	5	9	12	3	11	26

Table 6. Histologic Classification and Response to Combination Chemotherapy LP-lymphocyte predominance, NS-nodular sclerosis, MC-mixed cell, LD-lymphocyte depleted, Unclass.-unclassified.

Source	No. Cases Evaluated	Complete Number	Remissions Percent
De Vita et al[6]	43	35	81
Luce and Gamble[12]	44	28	63
Moores[13]	28	14	50
Brook and Gocka[14]	11	8	72
Frei et al[8]	178	117	66
Total	304	202	66
This study	26	12	46

Table 7. Summary of data on four-drug combination chemotherapy for Hodgkin's disease.

months of his illness. The bone marrow biopsy showed marked bone marrow infiltration and typical Reed-Sternberg cells. Hemorrhage caused by thrombocytopenia was encountered in the same patient preterminally and required platelet transfusions.

Paresthesia was noted in three patients who experienced transient tingling and numbness of the fingers. These disappeared in two patients without decreasing the dose of vincristine. The other recovered within two months after viscristine was omitted in one cycle. Subsequent smaller doses were tolerated. Foot drop was not encountered in any patient. Significant loss of hair was seen in two patients.

Discussion

Combination chemotherapy by historical comparison with single-agent therapy is clearly superior in the induction of complete remission of Hodgkin's disease[11]. A summary of published data **(Table 7)** reveals an average complete remission rate of 66% for 304 patients which compared to a maximum of 30% for single agents. The duration of these complete responses is significantly longer compared to those induced by single agents. It was also noted that in many patients who relapse on MOPP therapy, remission can be reinduced. To date the four-drug combination chemotherapy offers the best induction remission figures for stage III and stage IV Hodgkin's disease.

Patients with little or no previous therapy have a high complete remission rate (79-81%). However, previous chemotherapy and/or radiotherapy adversely affect the complete remission rate[7,8]. This may in part account for the low remission rate in this study since almost half of the induction failures received both prior radiation and chemotherapy.

Independent of prior treatment, patients with the most extensive and active disease (stage IV-B) have significantly lower complete remission rates and survival times[8]. Thus, the comparatively low remission rate observed in this study appears to be a reflection of the large proportion of patients with stage IV-B disease (15/26).

Another characteristic of the patient population is the large fraction of induction failures and deaths seen in the mixed cell and lymphocyte depleted group. The unfavorable prognosis imparted to patients with these cell types is well known[15,16].

The observation period for patients who achieved complete remission is as yet short and a longer follow-up will disclose a more representative survival pattern. The five patients in complete remission who finished the full maintenance treatment have a median survival of 32+ months. None has yet passed the two-year period after the end of treatment when most patients destined to relapse do so.

The role of maintenance therapy with MOPP was elucidated in a recent study[8]. Fifty-five percent of patients who received six months of MOPP treatment were still in complete remission two years after the end of treatment, whereas 77% of the patients who received 24 months of MOPP remained in complete remission two years later. In spite of the significant difference in length of remission favoring 24 months over six months, there was no significant difference in survival between the maintained and unmaintained patients. At four years 70% to 80% of patients in both groups were still alive. The explanation offered was that patients who received six courses of MOPP and relapsed had an excellent chance of achieving complete remission on retreatment with MOPP, whereas patients who were treated with 24 months of MOPP therapy and who relapsed were no longer responsive to MOPP.

Patients with localized forms of Hodgkin's disease who remain free of relapse four years after treatment with radiotherapy have a 90% chance of being cured. In patients with stage III and stage IV disease treated with total nodal radiation or intensive combination chemotherapy, preliminary data indicate that the relapse-free interval follows a qualitatively similar curve[17].

The control of Hodgkin's disease continues to improve. The newer agents (bleomycin, adriamycin, nitrosureas, dimethyl triazeno imidazole carboxamide) are effective in patients with Hodgkin's disease. They are currently being added into improved therapeutic regimes and some show impressive responses. Preliminary studies by Bonadonna, et al with a combination of adriamycin, bleomycin, vinblastine, and imidazole carboxamide (ABVD) have shown a complete remission in 75% of patients with advanced Hodgkin's disease. A complete remission occurred in 76% of patients in a comparable group. There was no difference between the two regiments as far as stage (III B - III_S and IV), histologic type, and prior irradiation were concerned nor was there a cross-resistance. These preliminary results indicate that ABVD could be a successful alternative to MOPP to be used either in MOPP failures or in sequential combination with MOPP.[19] The use of sequential radiotherapy and chemotherapy in the advanced and intermediate stages of Hodgkin's disease is promising.[18] We hope to apply these methods as optimal treatment programs are worked out and resources become available.

Summary

The preliminary experience with advanced Hodgkin's disease treated with a combination of nitrogen mustard, vincristine, procarbazine and prednisone (MOPP) at William Beaumont Hospital is presented.

Thirty-two consecutive patients with advanced Hodgkin's disease treated with MOPP from November, 1969 to November, 1973 were included in the study. These patients were previously staged by extensive radiologic studies including lymphangiograms, bone marrow biopsy, and exploratory laparotomy with splenectomy, liver and lymph node biopsies.

Complete remissions with no evidence of recurrent disease or symptoms and return to normal performance status were seen in 12 of 26 evaluable patients (46%) for up to 34 months. Five who have undergone two years of therapy and completed 15 courses of MOPP have a median survival of 32+ months.

A partial response was noted in five patients (19%) who received three to 15 courses of MOPP (median survival 11 months).

Nine (35%) were judged failures (median survival nine months). Of these, five had major radiation for earlier stages of disease. Four received radiation and chemotherapy with single agents before MOPP came into general use.

Six were not considered evaluable.

Our preliminary experience does not parallel the more gratifying results obtained in other studies where an average of 66% achieved complete remission. The 46% complete remission obtained barely approached a 50% complete remission seen in one study. Patients who have received prior major radiation and/or chemotherapy other than MOPP don't do as well as those with previously untreated disease who receive MOPP as primary treatment. The following patient characteristics may explain this difference in remission rate: (1) most of the patients received prior major radiation and/or chemotherapy, (2) a large fraction of patients had the most extensive and active disease. Nevertheless, combination chemotherapy by historical comparison with single agent therapy is clearly superior in the induction of complete remission of advanced Hodgkin's disease in largely untreated or minimally treated patients and to date offers the best chances of producing a remission until more effective treatment programs are developed.

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Perinatal Tips

By Paul M. Zavell, MD
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The following case from the files of the Wayne County Medical Society Perinatal Mortality Study Committee is presented as an aid in continuing education.

Maternal

This was the first pregnancy for this 21 year-old, Gravida 1, Para O (1), white mother with O-positive blood type. She was at term (40 weeks) and had had a completely uncomplicated pregnancy (being seen monthly from three months of pregnancy).

She went into labor with a sudden rupture of membranes. This was followed by a "few" quite strong labor pains and in less than an hour after rupture of the membranes she delivered her infant while still at home.

Mother and infant were brought by the father to the emergency room of a large hospital where under "sterile conditions" the delivery was completed by the obstetrician by delivery of the placenta. Mother and baby were then admitted to the hospital. Her post-natal course was uneventful except for a low grade fever (99-100° (0)) that had begun just before her labor began. She was never put on any antibiotics because she was not really sick and blood studies in the hospital were all normal.

Fetal

Upon admission to the observation-isolation area of the newborn nursery, this eight pound, five ounce white male infant appeared normal in all respects. A physical exam was done by the resident on duty. This was considered normal except "some molding in the occipital region with scattered bruises on the scalp", and only a single umbilical artery was present. The diagnosis was "Well Term New Born Boy (Delivery at Home)".

Studies done on admission revealed a cord blood count with hemoglobin of 24.4. gm, hematocrit of 80.0, Red blood count of 6.65 x 10^6, white blood count of 40,300 with 63 PMN, 05 Bd, 24 Lymphs, 07 Lymph and 01 Eosinophils with toxic granulation of PMN but adequate platelets, and a urine of yellow color, clear, S.G. of 1.019, Ph of 5.5, 2+ Protein and negative microscopic (except occ. WBC).

The infant's course seemed completely uneventful except for some regurgitation of formula on one occasion at 36 hours of age. However, at two and a half days of age he presented with a 101° temperature (but still didn't appear at all sick). Admission cultures of right ear, left axilla, groin, and gastric washings were now reported back as negative except for scant growth of Staph albus (Coag Negative) in the gastric washings.

The infant took the formula well and physical exam remained normal while the temperature persisted.

At three days of age a spinal tap and a blood culture were done. He was started on aqueous penicillin 180,000μIM every 12 hours and Kanamycin 27 mgm ever 12 hours intramuscularly. At three and a half days of age he was noted to be a "little" jaundiced. Bilirubin was done with a total of 8.2 mgm % and a direct of 0.8 mgm %. The spinal tap results were now reported as Xanthochromic fluid with 1964 Rbc, 08 WBC, 62 glucose, and 72 protein.

On the fourth day a chest x-ray was taken revealing a "pneumonic infiltration of the right upper lobe and some clouding of the left upper perihilar area." The impression was "right upper lobe pneumonia and possible left pneumonia."

At about this time he developed "repeated dusky spells with generalized rapid breathing" and a respiratory rate of 80-90/minute, "rolling of the eyes and hyperextension of the neck." Temp had continued to persist (being now 103° (rectal)).

Repeat x-ray on the fifth day confirmed the presence of the right upper lobe Disease (but not the left). Intravenous fluids started on the fourth day of 5% G/W with 0.2 N/S were continued. The penicillin was now changed to Ampicillin 180 mgm IV every six hours but the Kanamycin was continued unchanged. Blood and spinal cultures done earlier were reported as negative. Additional studies done at this time (fifth day of life) were Serum Calcium (7.8), and IGM 18 mgm.

Things remained much as they were (the infant was in an isolette receiving O_2 to pink up or else he became dusky) until the seventh hospital day when he had explosive loose stools (thought to be due to the Ampicillin and now this was again changed back to aqueous penicillin) and two generalized seizures. "Hypocalcemia and Hypoglycemia" were now entertained but blood tests drawn revealed Blood sugar of 108 and Calcium of 9.4.

(Continued on page 568)

Doctor Zavell is a member, Neo-Natal and Hospital Care Committee, Michigan Chapter, A.A.P.; and is chairman, Perinatal Mortality Study Committee, Wayne County Medical Society.

Potassium and Extracorporeal Circulation

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Abstract

To explore the cellular dispostion of potassium as influenced by extracorporeal circulation, the assumption was made that the red cell content of this cation may reflect that of other tissue beds. Unlike previous reports, very minor changes in serum potassium were noted during and immediately after extracorporeal circulation. However, a fall in cellular potassium was indicated if indeed the red blood cell reflects the content of this cation in other tissue beds. Notwithstanding the maintenance of serum potassium as reported herein, our findings are consistent with a loss of total body potassium, particularly in light of the cellular deficit resulting from extracorporeal circulation. Its replacement may be of critical importance in the management of disturbances in postoperative cardiac rhythm and function.

Intraoperative and postoperative shifts in potassium may have a pathogenetic influence on rhythm and myocardial function particularly in the presence of drugs such as isoproterenol and digitalis. Recognition of the origin and nature of these shifts is vital in the management of such cardiac disturbances frequently noted immediately following cardiac surgery.

Serum potassium has been observed to fall slightly or to remain essentially unchanged both during and immediately following extracorporeal circulation.[1,2,3,4,5] This has been reported to occur without significant change in hematocrit or serum sodium and in the face of an anticipated rise in serum potassium due to hemolysis.[3]

While there is fair agreement that the immediate *postoperative* decrease in serum potassium may be related to urinary losses,[1,3,4,6] uncertainty exists as to the disposition of potassium in the serum[2,3] and cell[7,8] *during* extracorporeal circulation. Respiratory alkalosis with cation shifts,[5,6] intracellular displacement of potassium by dextrose priming[1,3] and hemodilution[9,10,11] may all be operative in potassium fluxes. Ileus and sequestration of serum in extracellular compartments associated with extracorporeal circulation are other possible but unlikely causes of hidden potassium loss.[4,12]

In the midst of this uncertainty, it was our purpose to explore the possibility of a cellular shift in potassium in the course of assisted circulation. Therefore, *red blood cell* potassium concentration which may reflect that of other tissue beds[13,14] was compared to serum concentration during and after open heart surgery.

$$C_{RBC} = C_P + \frac{C_{WB} - C_P}{Hct}$$

Where

C_{RBC} = Concentration in red blood cell
C_P = Concentration in plasma
C_{WB} = Concentration in whole blood
Hct = Hematocrit fraction (e.g. 50% hematocrit = 0.5)[23]

Method

Seventeen patients undergoing open heart surgery were studied. Determinations were made of red blood cell potassium,* sodium,* calcium,[15] glucose[16] lactate,[17] glutathione,[18] pyruvate kinase,[19] lactic dehydrogenase,** and glucose-6-phosphate dehydrogenase.[21] Comparison was made with serum potassium, sodium, calcium, glucose, lactate and lactic dehydrogenase. The calculation of red blood cell content of these substances was based on the following formula:[22]

Serial pH determinations were made during the pump run.

The 17 patients (**Table I**) ranged in age from two to nine-and-a-half years and from 23 to 108½ pounds in weight (body surface area of .44 to 1.49 m^2). Seven had atrial septal defects, one of which was associated with an endocardial cushion defect; and another, with a left superior vena cava-left atrial communication. There were six patients with ventricular septal defects, two of whom had associated pulmonic stenosis; one of

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*Coleman Model 21 Flame Photometer with Model 22 Galvonometer, Coleman Instruments Inc., Maywood, Ill.

**Sigma Method No. 500, Sigma Chemical Co. 3500 DeKalb Street, St. Louis, Mo.

Table I
Patient and Pump Data

Patient	Age (years)	Sex	Race	Height (Inches)	Weight (Pounds)	BSA (M^2)	Diagnosis (See Text)	Total Pump Time (min)	Pump Prime
VH	3	F	N	38.25	33.50	0.63	IVSD	36	425 cc, 5% D/0.2% NaCl
LM	2	F	N	34.50	25.00	0.52	IASD, LSVA-LA	65	288 cc, 5% D/water
DP	2½	M	N	33.50	23.00	0.44	IVSD	33	258 cc, 5% D/water
ER	4	F	N	40.00	36.00	0.67	IASD	29	412 cc, 5% D/water
JS	8	F	N	42.00	37.50	0.70	IASD	13	425 cc, 5% D/water
VW	12	F	N	61.00	108.50	1.49	IASD	35	1,235 cc, 5% D/water
KW	4	F	N	41.00	53.50	0.66	IVSD	24	380 cc, 5% D/water
RC	9	M	W	48.25	49.50	0.87	PS,SAS	24	450 cc, 5% D/water
AD	3½	F	N	40.00	32.00	0.62	IVSD	45	360 cc, 5% D/0.2% NaCl
DF	9½	M	W	51.50	55.50	0.96	IASD	16	506 cc, 5% D/0.15% NaCl
MG	6½	F	W	44.00	47.75	0.79	IASD	41	434 cc, 5% D/0.15% NaCl
PG	11	F	W	57.50	77.50	1.21	IASD	25	702 cc, 5% D/0.2% NaCl
AG	4	F	N	37.00	24.00	0.52	IASD,PS,IVSD	60	272 cc, 5% D/water
DH	9	F	W	50.00	50.00	0.90	T/F	60	600 cc, 5% D/0.2% NaCl
VH	8½	F	W	48.00	50.00	0.88	IVSD,PS	66	525 cc, 5% D/0.2% NaCl
PH	2½	M	N	39.00	37.00	0.70	SAS	49	438 cc, 5% D/water
RR	6	M	N	51.00	55.00	0.94	AVC	22	4,000 cc, Whole blood only

ABBREVIATIONS USED:

D = Dextrose
IASD = Interatrial septal defect
KVSD = Interventricular septal defect
LSVC-LA = Left Superior Vena Cava — Left Atrial Communication
NaCl = Sodium Chloride
PS = Pulmonic Stenosis
SAS = Subvalvular Aortic Stenosis
T/F = Tetralogy of Fallot
BSA = Body Surface Area

these patients additionally had an atrial septal defect. Two patients had subaortic stenosis of the fibrous type, one of whom had valvular pulmonic stenosis as well. One patient had Tetralogy of Fallot, and one had an atrioventricular communis.

Circulation during open heart surgery in these patients was maintained with a Sarnes pump and a disposable Travenol oxygenator. All patients were primed with a dextrose solution (25 cc per kilogram body weight). In eight of these the prime consisted of 5% Dextrose and water. In the remaining eight the prime was 5% Dextrose and .15 to .2% saline. One patient, R.R., was primed with whole blood alone. Perfusion times varied from 13 to 66 minutes averaging 39 minutes.

Biochemical determinations were made in the immediate preoperative period, within five minutes of the onset of the pump run, immediately after termination of the pump run, one day postoperatively, and one week postoperatively. Statistical analysis of the observed changes was performed by application of the Chi square test.

Results

Table II enumerates the biochemical data which is summarized in **Table III.** A significant decrease in red blood cell potassium was measured in every case undergoing open heart surgery. This was most striking immediately following the initiation of extracorporeal circulation and persisted at a significantly low level at the end of the pump run ($p < .05$) and one day postoperatively ($p < .01$). By the end of the first postoperative week, return to control levels was noted. Unlike cell potassium, there was a significant change in the serum potassium only one week postoperatively.

A similar but less striking cellular loss of sodium was noted which, unlike the potassium loss, persisted throughout the seven days of observation ($p < .05$). This was accompanied by serum hyponatremia which was largely corrected by the seventh postoperative day. The slight increase in cellular calcium was most striking at the end of

Table II
Individual Metabolic Data as Influenced by Extracorporeal Circulation

		Potassium (mEq/L)		Sodium (mEq/L)		Glucose (mg %)		Lactic Acid (mg %)		GSH (mg%/ RBC)	PK (Units*)	LDH (Units **)		G6PD (Units**/ 97 Hgb)	Hemat (Vol %)	Hgb (gm %)
		P	C	P	C	WB	C	P	C			P	CX10			
VH	1	5.2	96	142	21	89	69	16.2	5.0	-	-	330	3200	12.1	53.5	18.0
	2	5.6	80	131	19	350	250	47.8	14.9	-	-	545	5390	11.9	45.0	14.9
	3	5.3	81	140	19	580	380	19.9	16.2	-	-	620	6005	12.0	47.0	15.0
	4	4.9	89	138	18	129	81	5.5	4.5	-	-	530	5018	11.5	49.0	15.9
	5	5.0	95	140	21	110	69	10.6	8.2	-	-	425	4005	12.5	45.0	14.7
LM	1	5.0	89	141	23	95	65	27.6	26.0	-	-	450	4295	13.5	39.0	13.2
	2	no sample		-	-	-	-	-	-	-	-	-	-	-	-	-
	3	4.9	85	132	18	565	380	39.0	35.2	-	-	580	4190	12.4	36.0	12.3
	4	5.2	78	140	18	135	92	10.5	9.0	-	-	600	5070	13.1	37.0	12.5
	5	5.0	87	142	22	89	68	31.5	27.6	-	-	570	4650	13.1	35.0	11.7
DP	1	5.8	95	144	17	65	55	-	-	-	-	316	2886	12.7	39.0	13.1
	2	no sample		-	-	-	-	-	-	-	-	-	-	-	-	-
	3	no sample		-	-	-	-	-	-	-	-	-	-	-	-	-
	4	5.1	83	135	18	141	64	-	-	-	-	580	6050	12.4	46.1	15.4
	5	4.8	89	143	20	125	75	-	-	-	-	320	2990	11.9	36.6	12.2
ER	1	4.9	82	140	25	75	68	14.0	12.3	70.6	2.83	200	2100	14.2	41.0	13.8
	2	no sample		-	-	-	-	-	-	-	-	-	-	-	-	-
	3	4.9	86	131	17	580	395	38.6	34.9	69.0	2.98	495	4790	11.1	38.0	13.0
	4	5.0	77	140	18	135	115	9.2	7.2	71.0	3.09	560	5385	13.1	39.0	13.2
	5	4.7	91	142	18	105	83	19.8	15.6	67.0	-	390	3695	14.3	41.0	13.9
JS	1	4.8	91	-	-	69	55	9.0	15.1	-	-	231	2688	15.9	37.3	-
	2	5.3	81	-	-	235	162	31.8	29.8	-	-	408	4152	9.7	30.0	-
	3	5.5	80	-	-	502	279	45.1	30.7	-	-	580	4368	9.8	26.5	-
	4	5.0	71	-	-	98	67	12.6	11.2	-	-	560	1095	9.1	41.2	-
	5	4.8	89	-	-	111	72	15.8	16.8	-	-	410	3909	10.1	37.9	-
VW	1	5.7	88	141	24	81	65	19.9	8.6	-	-	380	3010	11.2	42.3	13.4
	2	5.1	79	130	19	621	580	38.2	23.7	-	-	410	4351	9.3	36.8	12.4
	3	5.5	76	133	20	628	150	24.7	21.3	-	-	420	4300	9.5	36.0	10.2
	4	5.1	84	136	21	108	68	11.4	9.5	-	-	560	6780	10.2	48.2	16.0
	5	5.0	93	141	19	130	48	-	-	-	-	396	2940	11.5	49.5	13.1
KW	1	4.8	73	-	-	71	63	14.3	20.3	-	-	245	2324	13.6	37.1	15.1
	2	5.5	78	-	-	480	392	46.8	37.5	-	-	186	2546	11.1	36.2	12.0
	3	4.8	75	-	-	588	409	25.8	27.0	-	-	435	6285	10.9	36.4	12.0
	4	5.2	84	-	-	197	119	21.5	18.1	-	-	586	4975	12.5	40.7	13.4
	5	5.0	92	-	-	81	81	18.4	20.8	-	-	345	3461	13.1	38.2	12.5
RC	1	5.2	89	-	-	81	74	15.2	19.2	-	-	345	4218	13.2	40.6	-
	2	5.4	79	-	-	632	491	45.6	39.8	-	-	589	4685	9.8	36.3	-
	3	5.4	87	-	-	500	393	48.2	44.7	-	-	522	5121	12.8	36.3	-
	4	4.4	76	-	-	144	95	17.2	15.9	-	-	570	5045	10.0	44.9	-
	5	4.7	97	-	-	112	40	21.8	14.8	-	-	480	4829	12.8	34.9	-
AD	1	4.2	91	142	25	93	78	25.1	14.2	-	-	265	1219	-	43.0	13.2
	2	4.5	73	134	18	603	465	32.8	23.2	-	-	290	2478	-	34.0	10.2
	3	4.9	79	132	20	565	430	40.7	36.4	-	-	425	4620	-	37.0	11.6
	4	4.3	75	135	18	110	78	11.1	7.0	-	-	540	5800	-	51.3	16.6
	5	5.0	94	139	17	90	60	18.4	16.8	-	-	360	3690	-	41.7	13.8

(Continued on page 573)

On the eighth day the infant had three generalized convulsions and now the liver was felt four centimeters below the RCM but surprisingly enough the infant was now *afebrile*. The new diagnoses entertained were "neuroblastoma and sepsis." Repeat chest x-ray revealed "increased pulmonary markings," and an abdominal x-ray was "unremarkable except enlarged liver shadow." Hemoglobin was 18.0 gm, BUN was 32, repeat LP showed Xanthochromic fluid, 03 red blood count, 04 white blood count, 18 glucose and 250 protein.

On the eighth day of life the baby developed ecchymosis of the arm and left knee with profuse bleeding occurring from all puncture sites. Despite emergency care the patient's course steadily was downhill and he expired. Before death PT and PTT were markedly abnormal (greater than 400 sec. each).

An autopsy was done that revealed Herpes Simplex, Disseminated (Herpes Neonatorum) with adrenohepatic and pneumonic necrosis.

This patient's mother had a history of febrile illness shortly before delivery and continuing past the time of delivery. No genital Herpes was noted. The usual case of Herpes Neonatorum contracted at the time of delivery through the infected birth canal has an incubation period of approximately 4-5 days. The patient became ill at two and a half days and so its disease was probably transmitted transplacentally, prior to birth.

Perinatal Committee Comments

1. Although it is possible in a primapara to deliver a large infant with only a very short labor and delivery, this is probably *not* the case here for the infant's head showed "molding" and this takes some time to develop.
2. Before the first bath an axillary culture (or after the first bath an ear culture) as well as gastric washings culture can be helpful in trying to reconstruct the amniotic fluid environment of an infant, especially one born at home or en route.
3. The committee failed to see the rationale behind changing therapy from penicillin to ampicillin and back again to penicillin.
4. In an infant born under "non-sterile" conditions (i.e. at home or in the car) who later develops diarrhea it is wise to consider the possibility of pathogenic E. Coli as one cause, and although very rare one should also consider the possibility of Salmonella and/or Shigella infection.
5. With a fast delivery possible rarer complications to be thought of include pseudomonas infection, staphylococcal sepsis, CNS injury including hemorrhage and spinal cord injury.
6. This case points out that when thorough and exhaustive studies fail to reveal the proper diagnosis one should consider other causes such as virus and fungal infections.
7. Among other possible diagnosis (before death) can be included renal thrombosis, CNS Vein thrombosis and Disseminated Intravascular coagulation.

Pro-Banthīne®
brand of
propantheline bromide

Indications: Pro-Banthīne is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution. Fever and possibly heat stroke may occur due to anhidrosis.

Overdosage may cause a curare-like action, with loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted. Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthīne.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

How Supplied: Pro-Banthīne is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

SEARLE **Searle & Co.**
San Juan, Puerto Rico 00936

Address medical inquiries to: G. D. Searle & Co.
Medical Department, Box 5110, Chicago, Ill. 60680 481

"Antiacid" action for ulcer patients...

one of the many things you need in an anticholinergic.

Pro-Banthīne is considered adjunctive in total peptic ulcer therapy that may include diet, conventional antacids, bed rest, and other supportive measures.

Pro-Banthīne is provided in several different dosage forms which will meet virtually any clinical need. It is just as versatile in filling patient needs, among which are:

"Antiacid" action — Pro-Banthīne® (propantheline bromide) reduces gastric secretory volume and resting total and free acid.

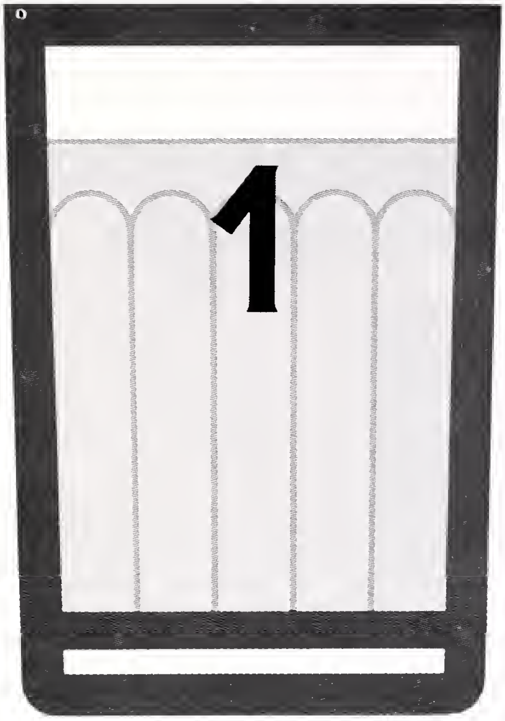
"Analgesic" action — Pro-Banthīne helps to control the acid-spasm-pain complex.

Vigorous anticholinergic action — Pro-Banthīne® Vials, 30 mg., are for intramuscular or intravenous use when prompt and vigorous anticholinergic action is required.

Mild anticholinergic action — Pro-Banthīne® Half Strength, 7.5 mg. tablets, for more exact adjustment of maintenance dosage in mild to moderate gastrointestinal disorders.

Pro-Banthīne®
(propantheline bromide)

a good
option
in peptic
ulcer



Adequate fluid intake

2
180 CC
150
120
90
60
30

Frequent voiding

The 3rd Basic

Gantanol®
(sulfamethoxazole) B.I.D.

Four tablets (0.5 Gm each) STAT–then 2 tablets B.I.D. for 10-14 days

Basic therapy with convenience for acute nonobstructed cystitis

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic non-obstructed urinary tract infections (primarily pyelonephritis, pyelitis, and cystitis) due to susceptible organisms. ***Note:* Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials, including sulfonamides, especially in chronic or recurrent urinary tract infections.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

- **Effective against susceptible E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis and, less frequently, Proteus vulgaris**

DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

makes sense

For long-term control of hypertension*

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

* WARNING
This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

'DYAZIDE'

Just once or twice daily for maintenance.

Hydrochlorothiazide to help keep blood pressure down and triamterene to help keep potassium levels up.

TABLE II/*Continued*

		Potassium (mEq/L)		Sodium (mEq/L)		Glucose (mg %)		Lactic Acid (mg %)		GSH (mg%/RBC)	PK (Units*)	LDH (Units **)		G6PD (Units**/97 Hqb)	Hemat (Vol %)	Hgb (gm %)
		P	C	P	C	WB	C	P	C			P	CX10			
DF	1	5.3	87	-	-	70	68	11.6	19.6	-	-	386	3105	-	34.4	-
	2	no sample		-	-	-	-	-	-	-	-	-	-	-	-	-
	3	5.5	76	-	-	450	395	51.2	46.5	-	-	589	5762	-	45.4	-
	4	4.8	75	-	-	142	97	12.1	11.8	-	-	621	4528	-	43.7	-
	5	4.8	94	-	-	105	75	20.7	18.9	-	-	318	3021	-	35.5	-
MG	1	5.5	88	-	-	101	58	10.6	17.2	-	-	421	2267	12.5	44.9	-
	2	no sample		-	-	-	-	-	-	-	-	-	-	-	-	-
	3	5.5	76	-	-	478	399	39.6	46.8	-	-	582	3821	12.3	31.8	-
	4	4.6	85	-	-	130	76	17.1	15.2	-	-	540	3100	13.5	34.0	-
	5	4.7	88	-	-	78	69	17.0	12.3	-	-	436	3465	11.9	37.2	-
PG	1	5.3	82	-	-	102	69	11.8	13.2	-	-	286	3065	-	40.0	-
	2	no sample		-	-	-	-	-	-	-	-	-	-	-	-	-
	3	5.0	83	-	-	658	425	48.6	39.9	-	-	582	3985	-	40.2	-
	4	5.2	79	-	-	125	102	14.8	13.8	-	-	520	6100	-	43.1	-
	5	4.8	92	-	-	80	79	9.8	7.6	-	-	434	3310	-	36.1	-
AG	1	5.8	87	143	19	76	59	24.2	21.1	-	-	-	-	11.8	46.0	13.7
	2	5.4	82	-	-	785	592	31.8	29.6	-	-	-	-	11.4	10.7	10.2
	3	5.8	90	133	16	-	-	38.2	37.4	-	-	-	-	11.0	35.2	12.8
	4	5.0	80	133	16	203	109	10.3	9.1	-	-	-	-	10.9	34.3	11.4
	5	4.6	88	140	19	100	81	21.6	13.3	-	-	-	-	11.6	32.0	10.7
DH	1	4.5	88	143	25	82	78	21.2	18.2	64.0	-	348	3595	12.6	38.4	13.9
	2	no sample		-	-	-	-	-	-	-	-	-	-	-	-	-
	3	5.2	82	135	21	472	409	35.6	32.5	53.1	-	560	6290	10.6	30.0	10.3
	4	5.2	72	132	17	130	76	16.2	13.0	56.6	-	580	3760	11.1	41.5	13.5
	5	4.8	88	139	19	98	67	30.1	23.5	61.2	-	460	3892	11.8	32.5	10.9
VH	1	4.9	85	142	18	65	58	18.4	8.0	71.3	-	400	4500	12.9	39.0	13.2
	2	no sample		-	-	-	-	-	-	-	-	-	-	-	-	-
	3	5.0	81	130	17	455	401	39.6	36.0	62.6	-	520	5750	11.9	36.0	-
	4	5.0	85	135	18	128	77	10.1	8.0	63.5	-	520	7790	12.0	42.0	14.1
	5	4.7	88	138	21	110	71	29.2	26.0	68.7	-	430	4590	12.2	40.0	13.5
PH	1	5.1	92	144	21	87	76	11.9	18.1	69.0	2.07	235	2400	14 1	35.0	12.2
	2	no sample		-	-	-	-	-	-	-	-	-	-	-	-	-
	3	5.1	82	132	18	358	250	47.0	45.2	59.6	2.18	460	4780	10.0	37.5	12.9
	4	5.0	88	138	18	130	105	9.6	7.6	61.0	2.65	595	5364	13.9	43.0	14.0
	5	5.0	95	138	18	110	86	13.5	11.1	58.0	2.07	400	4090	13.9	34.0	11.4
RR[6]	1	5.0	90	140	25	88	67	15.1	14.8	79.3	-	355	3680	12.1	37.0	12.3
	2	no sample		-	-	-	-	-	-	-	-	-	-	-	-	-
	3	5.0	78	131	19	135	81	27.5	25.1	50.7	-	455	5010	11.9	41.5	13.6
	4	5.1	81	139	18	130	76	19.8	10.1	67.3	-	543	5965	12.0	43.0	13.7
	5	5.1	82	141	17	95	62	16.4	15.0	79.2	-	400	4105	11.8	41.0	13.6

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* Bucher units: The amount of enzyme dissolved in one ml, which at 25°C and with a light path of 1 cm, changes the optical density at 340 mu by 0.001/min.

** Units: The activity resulting in the conversion of one micromole of DPNH to DPN per minute by 10^{10} erythrocytes at 37°C.[19]

1 One day before surgery
2 Immediately after the beginning of total bypass
3 Immediately after the end of total bypass
4 One day after surgery
5 Seven days after surgery
G6PD = Glucose-6-phosphate dehydrogenase

GSH = Glutathione
Hemat = Hematocrit
Hgb = Hemoglobin
LDH = Lactic Dehydrogenase
PK = Pyruvate Kinase

(Continued on page 576)

When serum cholesterol demands attention...

patients may need...
- Diet control
- A proven cholesterol-lowering adjunct to diet*
- Convenient once-a-day dosage*
- Reasonable cost*

***Choloxin®**

(sodium dextrothyroxine)

An agent for low density lipoproteins, "type II hyperlipidemia," in euthyroid, non-cardiac patients.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

See reverse side for full prescribing information

Choloxin® (sodium dextrothyroxine)

The Lipid-Lowering Agent with Once-A-Day Dosage

Four strengths . . . 1, 2, 4, and 6 mg. . . . are available making the scored tablet regimen a flexible dosage system. And, for most patients, CHOLOXIN tablets offer once-a-day dosage.

AN IMPORTANT NOTE:
It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

CHOLOXIN® (sodium dextrothyroxine) Single-Tablet-A-Day Dosage Schedules

See prescribing information in package insert reproduced below.

	Starting Dosage	Increased Monthly by	Usual Maintenance	Maximal Recommended
Adult Hypercholesterolemic	1.0-2.0 mg.	1.0-2.0 mg.	4.0-8.0 mg.	4.0-8.0 mg.
Pediatric Hypercholesterolemic	0.05 mg./kg. body weight	0.05 mg./kg.	0.1 mg./kg. body weight	4.0 mg.
Hypothyroid Cardiac	0.5-1.0 mg.	1.0 mg.	4.0 mg.	4.0 mg.

Choloxin®
(sodium dextrothyroxine)

Description
CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine. It is chemically described as D-3,5,3′,5′-tetraiodothyronine sodium salt.

Actions
The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

Most of the available evidence indicates that CHOLOXIN stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces. Cholesterol synthesis is not inhibited and abnormal metabolic end-products do not accumulate in the blood.

Indications
This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease.

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication.

Before prescribing, note the following: Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively in patients with significant myocardial impairment. CHOLOXIN dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications
The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease, including angina pectoris; history of myocardial infarction; cardiac arrhythmia or tachycardia, either active or in patients with demonstrated propensity for arrhythmias; rheumatic heart disease; history of congestive heart failure; and decompensated or borderline compensated cardiac status.
2. Hypertensive states (other than mild, labile systolic hypertension).
3. Advanced liver or kidney disease.
4. Pregnancy.
5. Nursing mothers.
6. History of iodism.

Warnings
CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care. Special consideration of the dosage schedule of CHOLOXIN is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels. Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN. As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients, and in surgery in hypothyroid patients in whom it may be advisable to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who had required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age
Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug; it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions
It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly, they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHOLOXIN for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions
The side effects attributed to dextrothyroxine therapy are, for the most part, due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient, although its relationship to CHOLOXIN therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN; a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration
For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN is approximately 0.1 mg per kilogram. The initial daily dosage should be approximately 0.05 mg per kilogram to be increased in up to 0.05 mg per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

How Supplied
CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4, and 6 mg tablets.

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Table III

Erythrocyte Metabolism as Influenced by Extracorporeal Circulation

	Pre-Op			Pre-Pump			Post-Pump			1 Day Post-Op			1 Week Post-Op		
	n	mean	SD	n	mean	SD	n	mean	SD	n	mean	SD	n	mean	SD
Potassium	S 17	5.1	0.44	7	5.3	0.37	16	5.2	0.30	17	4.9	0.27	17	4.9	0.15*
(mEq L)	C 17	87.8	5.37	7	78.9	2.91*	16	81.1	4.39**	17	80.1	5.37**	17	90.7	3.80
Sodium	S 11	142.0	1.41	3	131.7	2.08*	10	132.9	2.85**	11	136.5	2.73**	11	140.3	1.68
(mEq L)	C 11	22.1	3.05	3	18.7	0.58	10	18.5	1.58**	11	18.0	1.18**	11	19.2	1.66*
Glucose	S 17	81.8	11.88	7	529.4	187.5 **	15	501.0	128.0 **	17	136.2	26.95**	17	101.7	14.97**
(mg%)	C 17	66.2	7.54	7	418.9	162.5 **	15	345 1	106.5 **	17	88.1	17.47**	17	69.8	12.16
Lactate	S 16	24.5	31.29	7	39.3	7.35**	16	38.1	9.33**	16	13.1	4.30	15	19.6	6.56
(mg%)	C 16	15.7	5.44	7	28.4	8.64**	16	34.7	9.05**	16	10.8	3.76**	15	16.6	5.96
GSH (mg% RBC)	5	70.8	5.52				5	59.0	7.37	5	63.9	5.56	5	66.8	8.16
PK (units)	2	2.5	0.54				2	2.6	0.57	2	2.9	0.31			
LDH (units)	S 16	324.6	74.49	6	404.67	151.44	15	520.3	68.86**	16	562.8	29.65**	16	410.88	62.68**
	C 16	3034	883.5	6	3933.67	1179.13*	15	5005.0	831.8 **	16	5114.0	1539.0 **	16	3796.37	597.40**
G6PD (units/ gm Hgb)	14	13.0	1.42	6	10.53	1.07*	13	11.3	1.06**	14	11.81	1.42*	14	12.32	1.07
Ht	17	40.4	21.33	7	35.57	4.976	16	36.9	5.14	17	41.9	4.90	17	38.12	4.54
Hb	12	13.8	2.35	5	11.94	1.938	10	12.4	1.45	12	14.0	1.61	12	12.67	1.29

Cell Survival (average of three cases)

Pre-Op	45.4 days half life
Post-Op	27.2 days half life

ABBREVIATIONS USED IN TABLE:

n = Number of samples
C = Cell
GSH = Glutathione
G6PD = Glucose-6-Phosphate Dehydrogenase
LDH = Lactic Dehydrogenase
PK = Pyruvate Kinase
S = Serum or plasma
WB = Whole Blood
* = P < .05
** = P < .01

pumping and was independent of a change in serum calcium. These shifts are unlikely related to the minimal increase in pH which was most striking early after pumping was started **(Figure I)** since on this basis potassium, for example, would have been expected to enter the cell.

The increment in cell and serum glucose was of more than sufficient amplitude to suggest a hyperglycemic influence of extracorporeal circulation independent of that due to the glucose prime.

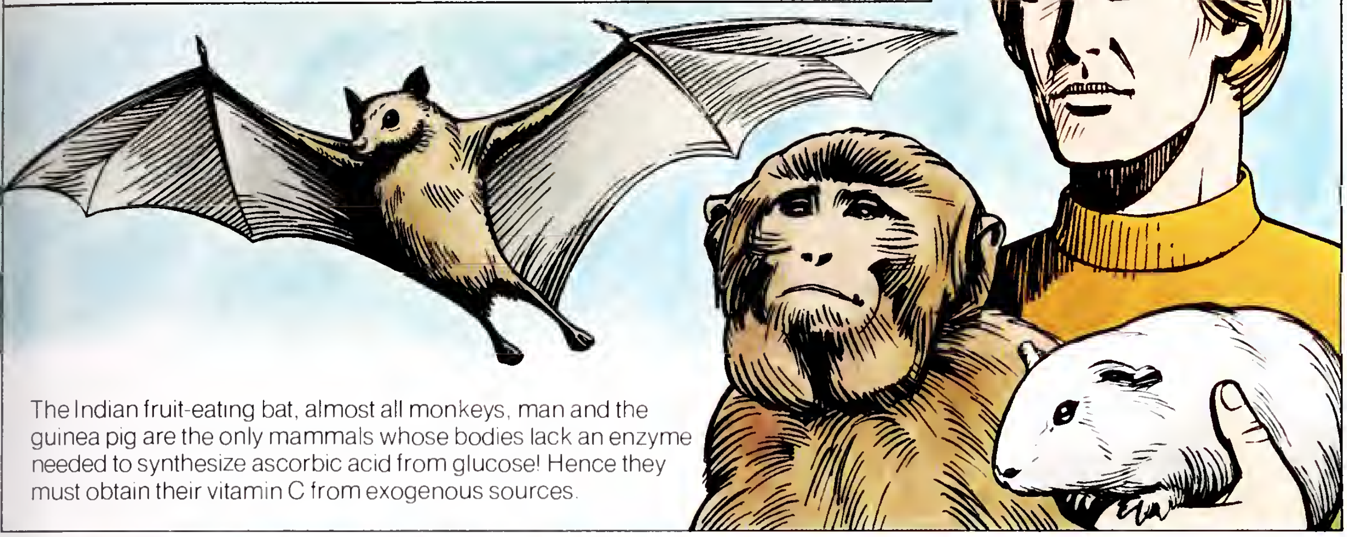
Increases in both serum and cell lactate were measured (p < .01). This was slightly more striking in the serum. Notwithstanding the persistence of the high glucose concentration in both serum and cells on the day following surgery, lactate concentration in both serum and cells on the day following surgery, lactate concentration in both serum and cells fell below the baseline levels at this time, the latter to a level of significance (p < .01). At one week, lactate had returned to preoperative levels in both compartments.

Of five patients in whom glutathione determinations were performed, a decrement was observed in each at the termination of the pump run. By the first postoperative day, however, glutathione had returned to preoperative levels which were maintained seven days postoperatively. The red blood cell level of glucose-6-phosphate dehydrogenase was noted to fall slightly. This was most marked at the end of the pump run. Cellular pyruvate kinase which was measured in only two cases was noted to increase, particularly at the end of the pump run. This persisted to a lesser extent on the day following surgery. By the seventh day postoperatively, however, pyruvate kinase levels had fallen below those measured preoperatively.

A significant increment in cellular lactic dehydrogenase was measured at the end of the pump run (p < 01). This increase persisted to an even greater degree one day postoperatively (p < .01). Similar changes in serum lactic dehydrogenase were noted with maintenance of an approximate 10:1 relationship between the cell and serum concentration of this enzyme.

(Continued on page 579)

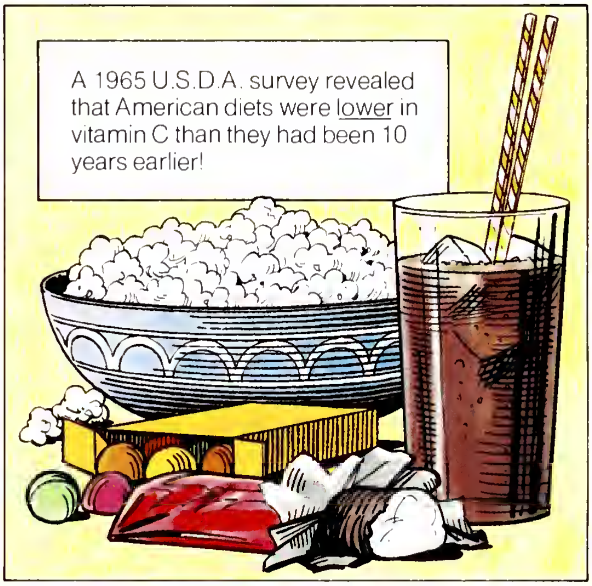
The ALLBEE® with C Scrapbook of Vitamin Facts & Fallacies



The Indian fruit-eating bat, almost all monkeys, man and the guinea pig are the only mammals whose bodies lack an enzyme needed to synthesize ascorbic acid from glucose! Hence they must obtain their vitamin C from exogenous sources.

De Joinville writing about a 13th century crusade reported that barber surgeons had to "cut away the dead flesh from the gums to enable people to masticate their food." The disease he described was probably scurvy.

A 1965 U.S.D.A. survey revealed that American diets were lower in vitamin C than they had been 10 years earlier!



The outer leaves of cabbage and brussels sprouts contain more vitamin C than the heads. Yet, ironically, these are often trimmed away by the grocer to improve appearance and enhance sales appeal! Many housewives trim them even more before cooking!

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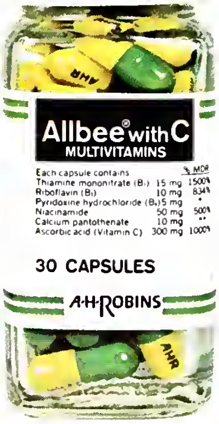
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hyoscine hydrobromide	0.0065 mg	0.0065 mg.	0.0195 mg.
phenobarbital (warning: may be habit forming)	(¼ gr.) 16.2 mg	(½ gr.) 32.4 mg	(¾ gr.) 48.6 mg

Brief summary. Adverse Reactions: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Contraindications: Glaucoma; renal or hepatic disease; obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); or hypersensitivity to any of the ingredients.

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Discussion

The red blood cell (RBC) is a tissue readily accessible for the determination of biochemical and metabolic composition. Although it differs from other tissues in some important respects (anaerobiasis, insulin independence) the human RBC behaves like those tissues often reflecting the general metabolic state of the organism.[13] While RBC potassium content may be normal in association with a total body (and/or tissue) potassium deficit, a decrease in RBC potassium is consistent with a total body (and/or tissue) deficit.[24] Soloff et al suggest that red blood cell potassium deficiency may reflect potassium deficiency in other tissues such as the myocardium.[14] If this is true, then the regular demonstration of a potassium decrement at the RBC level in this study suggests that the postulated intracellular shift of potassium during extracorporeal circulation as proposed by Marcial et al[8] may be questioned. They suggest that this intracellular transfer may be the basis for the observed decrease in serum potassium during the pump run. Our studies failed to demonstrate a similar decrease in serum potassium which remained remarkably constant during and after open heart surgery **(Table II** and **III)**. Respiratory alkalosis may shift in potassium into the cell;[5] but again no such shift was observed in the current study. Moreover, insignificant changes in pH were observed in most of the patients in whom serial determinations were made **(Figure I)**.

Supporting our observations are those of Schimert et al[25] who reported that the cellular potassium content of left ventricular papillary muscle removed during cardiac surgery was decreased as compared to control tissues. He did not speculate as to the possibility that the decrease in cell potassium may have been influenced in part by extracorporeal circulation. Unlike the present study, however, he noted an increase in cellular sodium and referred to a reciprocal relationship between these two cations. This has been demonstrated in other patients in congestive failure.[24] Although there was no available preoperative cellular sodium determinations in the study of Schimert et al[25] to assess the possible influence of extracorporeal circulation on the cellular cation shifts, their observations may, as proposed, have also been secondary to congestive failure. In the present study, cellular sodium, like potassium, was regularly noted to decrease suggesting an acute effect of the pump.

The maintenance of the RBC-serum potassium gradient is known to be dependent on glycolysis which, if inhibited, will result in cellular potassium efflux.[26,27] While a considerable loss was indeed observed at the end of the pump run there was no evidence of inhibition of glycolysis. On the contrary, it appeared that the Embden-Meyerhoff cycle may have been accelerated as indicated by an increase in cell lactate, lactic dehydrogenase and pyruvate kinase, possibly at the expense of the hexose monophosphate shunt as indicated by decrement in glucose-6-phosphate dehydrogenase and glutathione.

Loss of RBC potassium is probably dependent in part on an increase in intracellular ionizable calcium.[27] A cellular calcium increment was observed during the pump run and may have abetted potassium losses.

Maintenance of the cell-serum potassium gradient is mediated by a glycolysis-dependent active sodium expulsion from the cell which has been shown to be as great as 20 mEq/L (cell volume) in as little as six hours.[26] The observed potassium loss during extracorporeal circulation cannot be ascribed to a failure of this mechanism since a decrease in cellular sodium was observed during the same period. Dilution is also an unlikely cause for the decrease in RBC potassium in the absence of a significant decrease in serum potassium. While altered cell membrane permeability may be causal, one would expect shifts in sodium to move with the gradient rather than against it. Whatever the mechanism of cellular potassium and sodium losses, it appears to be a transient one with restoration of cellular levels of both cations to near normal by one week following surgery **(Tables II** and **III)**.

The reason for the very rapid decrease in cell potassium so soon after the onset of the pump run is difficult to explain. Ebert's group[4] measured the potassium content of the perfusate at the termination of extracorporeal circulation and failed to demonstrate a pump induced potassium washout. Possibly RBC trauma (prehemolytic) was in part operative in altering membrane permeability. If so, one would expect an increase in serum potassium and an influx of sodium into the RBC in parallel with its gradient. Neither was observed.

If indeed the RBC potassium decrement reflects a similar change in other tissues induced by extracorporeal circulation, one would expect an increase in urinary potassium. Such a tissue and urinary disposition of potassium has indeed been recently suggested[7,28] in contradistinction to the report of Marcial et al.[8] While there is general agreement that postoperative potassium excretion exceeds control values[1,2,3] conflicting views exist as to the disposition of urinary potassium during extracorporeal circulation. Some have observed an increase or at least maintenance potassium excretion during the pump run[1,2] while others have noted a decrease.[3]

This report assumes that the RBC is representative of other tissues. It is, however, particularly vulnerable to the noxious mechanical influences of extracorporeal circulation. On the basis of our observations and those previously reported, it is therefore concluded that although there may indeed be a total intracellular potassium loss, the ultimate disposition of this cation in the course of cardiac surgery remains uncertain. Further studies are warranted, particularly at the cellular level, possibly utilizing homogenates of serially obtained skeletal muscle in the course of extracorporeal circulation. Finally, the findings herein suggest a net potassium loss, the replacement of which may be vitally important in the management of postoperative cardiac rhythm and function.

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1975 MSMS Scientific Meeting Program Taking Shape

Women today have rising expectations for their health care, as well as for their personal development and positions in the home and work force. Fulfilling modern woman's health care expectations will be the subject of one of the top-notch sessions planned during the 1975 MSMS Annual Scientific Meeting Nov. 11-13.

National experts secured for the session include Barbara Bland, RN, Louisville, president, Nurses Association, American College of Obstetrics and Gynecology; Joan Goldstein, Princeton, member, National Task Force on Health, National Organization for Women; J. Robert Willson, MD, ob-gyn chief, U-M Medical Center. Others participating will be Richard T. Mellis, MD, Kalamazoo, former chairman, MSMS Committee on Ob-Gyn, and Joan C. Stryker, MD, WSU Department of Ob-Gyn.

Block the dates out now on your calendar, Doctor, for the expanded three-day meeting at spacious, new Michigan Inn, Southfield, where you will see the latest advances in medical research, products and equipment in the Exhibition Hall and hear noted medical authorities from Michigan and other medical centers across the nation.

More top-level programs on the drawing board for the scientific meeting include sessions on "Cutaneous Basophil Hypersensitivity," (allergists), "Malpractice Insurance for Physicians in Michigan," with the state insurance commissioner, "Biotransformation and Toxicity of Anesthetics," arranged by the anesthesiologists; "The Pathology of Diabetes and Hypertension," arranged by internists; "The Irritable Bowel Syndrome and Diverticular Disease," arranged by gastroenterologists; "The Suicidal Physician and The Family's Role in Treatment," arranged by the psychiatrists, and a panel presentation on "Breast Cancer," arranged by the radiologists.

Noted physicians from Louisville, Princeton, Boston, Baltimore, Cleveland, Chicago, Park Ridge, Ill.; and Philadelphia already have confirmed their plans to contribute to the scientific sessions.

Each of the scientific sessions is being arranged by Michigan specialty societies and specialty sections of MSMS. This year's scientific meeting has been expanded to three days to make room for all the specialty groups' activities.

A special welcome is being extended this year to medical students, nurses and medical assistants, and special programs, including tours of Detroit-area attractions, are being arranged for physicians' spouses.

Extra-curricular activities in the works include awards ceremonies, a practice management seminar, physicians' art show, continuing medical education seminar and a MDPAC meeting.

The preliminary schedule of meetings planned by specialty organizations for the MSMS Scientific Meeting now looks like this:

Tuesday, Nov. 11

Emergency Physicians
Neurologists
Public Health and Preventive Medicine
Proctologists

Wednesday, Nov. 12

Allergists
Obstetricians-Gynecologists
Otolaryngologists
Plastic Surgeons
Dermatologists
Clinical Pharmacology and Therapeutics
Ophthalmologists
Orthopedic Surgeons
Pediatricians
Surgeons
Urologists

Thursday, Nov. 13

Chest Physicians
Orthopedic Surgeons
Thoracic Surgeons
Anesthesiologists
Industrial Physicians
Occupational Medicine
Family Physicians
Gastroenterologists
Internists
Psychiatrists
Radiologists
Surgeons

Here's a Rundown

All 1975 Michigan Professional Liability Legislation Described

by Thomas R. Berglund, MD
Chairman, MSMS Committee on State Legislation & Regulations

So much legislation was passed this year in response to physicians' and hospitals' professional liability crisis that, understandably, few doctors know or appreciate the full package that was passed by the 1975 Legislature.

Fourteen separate bills, plus the appropriation to the Department of Licensing and Regulations (wherein lies the Medical Practice Board) were enacted affecting professional liability. While these bills do not of themselves "solve the malpractice mess," it is the most meaningful and drastic government action since insurance premiums began to rise in the late 1960s.

Indeed, Governor Milliken said as he signed the final group of malpractice bills, "This is something of a landmark in our state and in the nation . . . We have resolved the short-term crises in availability of insurance and laid the groundwork for the long-term solutions to the medical malpractice insurance problem . . . I think we have constructed the most balanced and comprehensive approach to the problem of any state in the nation."

* * *

Already MSMS is putting together its new set of objectives for the long-term solution. The Council has passed on to the MSMS Committee on State Legislation for study and consideration a number of feasibility studies for new legislation. They include a statutory definition of what medical malpractice really is, ceilings on rewards, further work on contingency fees, modifying the *ad-damnum* clause to remove dollar declarations of damages, affidavit of merit, burden of proof and access to medical records. The committee will meet Sept 25 to pursue The Council's directive, and other possible avenues.

Aside from legislative action, the State Supreme Court this year moved to limit contingency fees in liability cases. Though not as stringent as hoped for, a public policy has been established in Michigan against abuses of contingency fees.

Following is an analysis of 1975 professional liability legislation:

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• Public Act 43 (Enrolled Senate Bill 507)

Malpractice Fund Act

Amends the insurance code to establish a medical malpractice insurance fund to provide "eligible providers" with insurance for losses "resulting from all claims and actions alleging malpractice, error, or mistake and based upon professional services rendered or which should have been rendered by the insured or his assistants or employees, and to defend and indemnify the insured against any loss resulting from any other action for civil damages arising out of the practice by the insured of his profession." Any deficit incurred by the fund may be recouped by an assessment against all insured providers in that class.

Comment: Under the act the Insurance Commissioner may designate a specific class of health providers as eligible providers upon finding that the providers cannot readily obtain malpractice insurance or obtain malpractice insurance for a reasonable premium. So far, only MDs have been designated eligible providers. Hospitals, osteopathic physicians, podiatrists and other health professions are subject to the act and could be designated eligible providers.

• Public Act 44 (Enrolled Senate Bill 387)

Malpractice Case Reporting by Insurance Companies

Amends the insurance code to require malpractice insurance companies to report to the Insurance Commissioner data on malpractice complaints and final court actions. The Insurance Commissioner is required to report final judgments against physicians or hospitals to the Department of Public Health or the licensing body, whichever is appropriate. There is limited confidentiality for the information.

• Public Act 106 (Enrolled House Bill 4792)

DO Society Disciplinary Action Reports

Amends the osteopathic practice act to require that a professional society of osteopathic physicians (e.g., MAOPS) shall report to the State Board of Osteopathic Registration and Examination "all information relevant to any disciplinary action taken by that society against a member."

Comment: This will require MSMS to report such disciplinary action against members to the Medical Practice Board.

• Public Act 107 (Enrolled House Bill 4793)

MD Society Disciplinary Action

Amends the medical practice act to require any professional society of MDs (e.g., MSMS) to report to the Medical Practices Board "all information relevant to any disciplinary action taken by that society against a member."

Comment: An amendment was rejected which would have required that the disciplinary action be related to the professional practice of the physician.

• Public Act 111 (Enrolled House Bill 4794)

Hospital Reports of Medical Staff Suspension

Amends the hospital licensing act to require hospitals to report to the appropriate medical licensing boards "the name of a person and the relevant circumstances causing any of the following:

"(a) The resignation of the person from the medical staff.

"(b) The removal or suspension of a person from the medical staff.

"(c) Any other disciplinary action relating to professional practice taken against a member of the medical staff."

Comment: The bill as originally introduced would have required only the reporting of names of physicians removed or suspended from the medical staff of a hospital. The Governor's office proposed the extension of the law to include resignations and other disciplinary action. The House Committee recommended that all disciplinary action must be "related to professional practice" but the amendment was striken by the full House. Later, the Senate reinstated the amendment which was retained in the final version of the bill.

• Public Act 112 (Enrolled House Bill 4799)

Continuing Education for MDs

Amends the Medical Practice Act to require physicians to receive 50 hours of continuing education annually in order to renew a license. The requirement can be waived in limited circumstances when the failure of the licensee to receive the continuing education was due to circumstances beyond the control of the licensee.

Comment: This act is effective for re-registration for 1977. The Medical Practice Board, with MSMS cooperation, is developing rules and regulations to identify approved educational courses and experiences, and an accounting system of courses taken by individual doctors. Implementation will require a great amount of preparation.

• Public Act 119 (Enrolled House Bill 4858)

Peer Review Immunity

Provides immunity for liability for acts and communications within the scope of a peer review entity and provides for limited confidentiality of peer review records. Under the act, it provides that anyone may provide information to a review entity concerning the "physical or psychological condition of any person, or the necessity, appropriateness, or the quality of health care rendered to any person." In the act, a review entity is defined as "a duly appointed peer review committee of the state, of a state or county association of health care professionals, of an officially constituted health care facility, or of a health care association; a professional standards review organization qualified under federal or state law; a foundation or organization acting pursuant to the approval of the state or county medical society; or a state department or agency whose jurisdiction encompasses such information."

The bill allows a review entity to release its proceedings, reports, findings and conclusions in order:

"(a) To advance health care research or health care education.

"(b) To maintain the standards of the health care professions.

"(c) To protect the financial integrity of any governmentally-funded program.

"(d) To provide evidence relating to the ethics or discipline of any individual or entity engaged in the practice of medicine or health care."

The bill further provides that the identity of any person whose condition or treatment has been studied shall be confidential. Also, all proceedings, reports, findings and conclusions of review entities (except as above) are confidential and "shall not be discoverable or used as evidence in any action for personal injuries based upon malpractice, lack of informed consent, or negligence."

Comment: This bill caused several weeks of debate in the Senate Health, Social Services and Retirement Committee in part because an employee of the Department of Social Services proposed a substitute bill which would have seriously weakened the bill. The bill was broadened to include all "health care" instead of "medical care" at the request of the Optometric Trade Association. The language in this act providing for non-discoverability of the peer review information in court proceedings should be compared with section 12(2) of the hospital licensing act which provides that all hospitals peer review records "shall not be public records and shall not be available for court subpoena" except for medical staff resignations, suspensions, removals, or other disciplinary actions.

• Public Act 123 (Enrolled House Bill 4326)

Good Samaritan Act

Extends the present Good Samaritan Act to cover certain persons who, in good faith, respond to a life threatening emergency or to a request for emergency assistance in a life threatening emergency within a hospital or other licensed medical care facility. The language also expands the present coverage of physicians and registered nurses to include dentists, podiatrists, interns, residents, registered nurses, licensed practical nurses, registered physical therapists, clinical laboratory technologists, inhalation therapists, certified registered nurse anesthetists, X-ray technicians, and paramedical persons whose "actual hospital duty . . . did not require a response to that emergency situation." The exemption does not apply where a physician-patient relationship or a nurse-patient relationship existed prior to the advent of the emergency. A Senate amendment was added to provide that "nothing in this act shall diminish a hospital's responsibility to reasonably and adequately staff hospital emergency facilities when the hospital maintains or holds out to the general public that it maintains such emergency room facilities."

Comment: The present Good Samaritan Act is not touched by Public Act 123, but a new section is added to cover in-hospital situations.

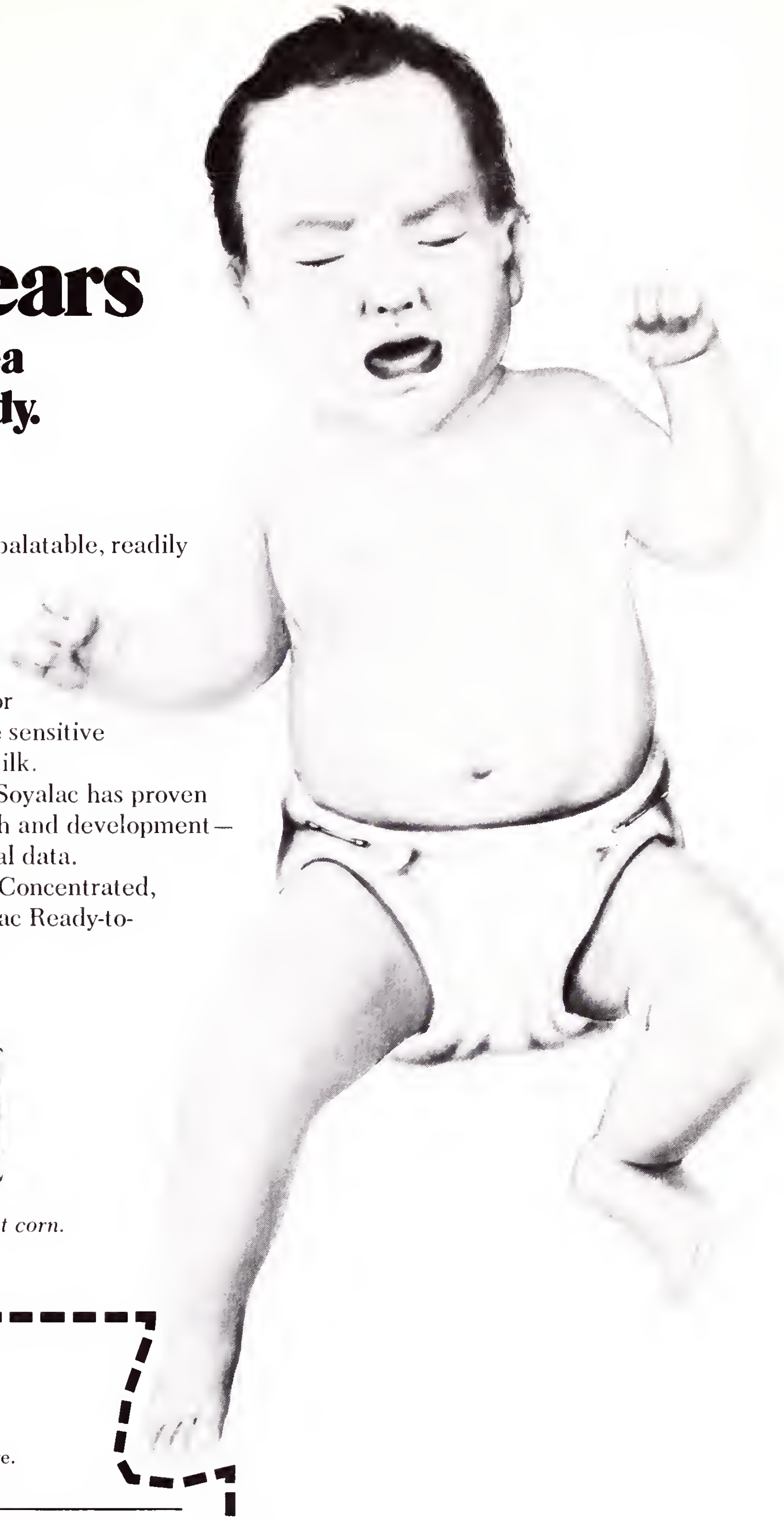
• Public Act 125 (Enrolled House Bill 4790)

Criminal Penalty for Sale of Medical Records

The act amends the Michigan Penal Code to provide a misdemeanor penalty for the sale or purchase of "the identity of the patient or any information concerning the treatment of the patient, including but not limited to information contained in the files or records of a health care facility, health care provider, or insurance company."

Comment: The bill as originally introduced would have covered only the sale of information but was expanded in the House to include the person who receives, buys, or offers to buy the medical records.

(Continued on page 586)



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• Public Act 140 (Enrolled House Bill 4803)

Arbitration of Malpractice Cases

The bill amends the Revised Judicature Act to establish a system to provide for the arbitration "of a dispute, controversy, or issue arising out of or resulting from injury to, or the death of, a person caused by an error, omission, or negligence in the performance of professional services by a health care provider, hospital, or their agent, based on a claimed performance of such services without consent, in breach of warranty, or in violation of contract." The bill requires that a person who receives health care in a hospital may execute an agreement to arbitrate a malpractice dispute but the hospital may not provide that its execution is a prerequisite to health care treatment. The person receiving treatment, but not the hospital, may revoke the arbitration agreement within 60 days after discharge.

All surgical and medical procedures performed by a participating physician in a hospital shall be covered by the terms and conditions applicable to the agreement between the patient and the hospital.

The act contains provisions providing for arbitration proceedings, including right to counsel, establishment of the prevailing standard of practice, rules of evidence, costs of arbitration, and selection of arbitrators. Where a case involves a hospital only, a hospital administrator may be substituted for a physician on an arbitration panel.

Arbitration contracts covering office and ambulatory care not in-hospital may be executed annually by physician and patient. In such cases, the 60-day "opt-out" provision is from date of execution. Such contracts are valid for one year only; in the hospital, new contracts must be executed for each admission.

Comment: This bill is the result of the efforts of a malpractice coalition composed of the UAW, Catholic Conference, State Chamber of Commerce, Michigan State Medical Society, Michigan Hospital Association, Physicians Crisis Committee, AFL-CIO, and others.

• Public Act 141 (Enrolled House Bill 4806)

Arbitration–Insurance Act Provisions

The act amends the insurance code to require, as a condition of doing business in Michigan, that a malpractice insurance company cannot refuse to offer insurance to a health care provider or hospital that has valid arbitration agreements with patients. It further states that any malpractice insurance policy must contain a provision which requires the hospital to offer a form of arbitration

(Continued on page 588)

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MEETINGS

Sept. 11-12 — Seminar, "Preventive and Rehabilitative Measures in Surgery of Head-Neck Cancer," cosponsored by Sinai Hospital of Detroit, Michigan Cancer Foundation and American Cancer Society, at Sinai Hospital, contact: Sinai Hospital, 6767 W. Outer Drive, Detroit, 48235.

Sept. 12 – 38th Annual Meeting, Michigan Society of Mental Health, Raleigh House, Southfield, contact: MSMH, 27208 Southfield Road, Lathrup Village, 48076

Sept. 13 — September Seminar, "Pathology of the Breast," Michigan Society of Pathologists, St. John Hospital, Detroit, contact: Robert Hendrix, MD, Department of Pathology, University of Michigan, Ann Arbor, 48104.

Sept. 17 — Annual Muskegon Trauma Day, Holiday Inn, Muskegon, contact: G.W. Annessa, MD, 1470 Peck St., Muskegon, 49441.

Sept. 24 — The Council, MSMS headquarters, contact: Warren F. Tryloff, director.

Sept. 25-26 — Postgraduate Course, "Management of Pulmonary Disease for Family Physicians," sponsored by WSU School of Medicine, Michigan Academy of Family Physicians and American Lung Association of Southeastern Michigan, at Scott Hall, WSU School of Medicine, contact: Suzanne Gibson, American Lung Association of Southeastern Michigan, National Building, 28 West Adams, Detroit, 48226.

Sept. 25-27 – Postgraduate course, "Implant Surgery for Joints and Tendons in the Hand," sponsored by American Society of Surgery of the Hand, at Blodgett Memorial Hospital, Grand Rapids, contact: Alfred B. Swanson, MD, course chairman, 313 Blodgett Medical Building, Grand Rapids, 49006.

Sept. 25-27 – Workshop, "Immunoglobulin A," for pediatricians and immunologists, Children's Hospital of Michigan, sponsored by WSU School of Medicine, Continuing Education Division, contact: Department of Continuing Medical Education, Wayne State University School of Medicine, Detroit 48201.

Sept. 30 — Annual Surgical Symposium of WSU and Children's Hospital of Michigan surgical departments, at Children's Hospital, contact: Maggie Stiegler, director, Department of Community Relations, Children's Hospital of Michigan, 3801 Beaubien Blvd., Detroit, 48201.

Oct. 8-9 — Joint meeting, MSMS Committee on Maternal and Perinatal Health, Michigan Society of Ob-Gyn, and Perinatal Association of Michigan, at MEA Conference Center, St. Mary's Lake, Battle Creek, contact: Helen Schulte, MSMS headquarters.

Oct. 9-10 — Mack Symposium on Physiology and Pathology of Reproduction, sponsored by WSU Department of Ob-Gyn and C.S. Mott Center for Human Growth and Reproduction, at Engineering Society of Detroit, 100 E. Farnsworth, Detroit, contact: Kamran S. Moghissi, MD, Scott Hall, WSU, 5400 E. Canfield, Detroit, 48201.

Oct. 14-16 — Postgraduate course, "Cardiology for Internists," Towsley Center, University of Michigan*.

Oct. 15-16 — Fall Meeting, Southwest Michigan Perinatal Association, in Kalamazoo, contact: Neonatology Service, Bronson Methodist Hospital, 252 E. Lovell, Kalamazoo, 49006.

Oct. 24 — Seminar on Arbitration, sponsored by Michigan Hospital Association, at Kellogg Center, East Lansing, contact: Robert Runyan, Patric E. Ludwig, president, MHA, 2213 E. Grand River Ave., Lansing 48912.

**Contact Robert K. Richards, director, Office of Intramural Education, Room 6-1109, Towsley Center for Continuing Medical Education, University of Michigan Medical Center, Ann Arbor, 48104.*

LEGISLATION/*Continued*

agreement to each patient treated or admitted. The insurance policy must require that all hospital personnel are bound by the terms of the hospital's agreement to arbitrate.

The act requires that the Insurance Commissioner shall require that the hospital accomplish "substantial participation" in arbitration by the independent hospital staff of a hospital. Substantial participation is defined as having, within one year, independent hospital staff participation accounting for 75 per cent of patient treatment or admissions; in the second year, 85 per cent of such treatment or admissions; and in the third year, 90 per cent of such treatment or admissions.

An arbitration advisory committee composed of 18 members (including ½ health care providers) who shall consult with the commissioner, health care providers, hospitals, the State Bar, and any association administering arbitration proceedings.

Comment: This is the so-called enabling provision of the arbitration package which requires hospitals to implement an arbitration program as a condition of acquiring malpractice insurance.

(Continued on page 590)

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• Public Act 142 (Enrolled Senate Bill 227)

Statute of Limitations

The bill amends the present statute of limitations to reestablish the tolling of the present 2-year statute on the last day of treatment "regardless of the time the plaintiff discovers or otherwise has knowledge of the claim." For malpractice that could not have been discovered within the 2-year limit, the bill provides a 6-month limitation "after the plaintiff discovers or should have discovered the existence of the claim." In such cases the plaintiff has the burden of proving that he "as a result of physical discomfort, appearance, condition, or otherwise, neither discovered nor should have discovered the existence of the claim at least 6 months before the expiration" of the statute of limitations.

The present language of the act was extended to include an intern, resident, registered nurse, licensed practical nurse, registered physical therapist, clinical laboratory technologist, inhalation therapist, certified registered nurse anesthetist, X-ray technician, hospital, licensed health care facility, employee or agent of a hospital or licensed health care facility who is engaging in or otherwise assisting in medical care and treatment, or any other state licensed health professional.

Comment: The bill differs significantly from the original MHA and MSMS bills. It is a compromise bill drafted to meet the objections of legislators who refuse to pass a statute of limitations that would completely cut off claims of persons who could not have known of the malpractice within the original two-year limitation.

• Public Act 143 (Enrolled House Bill 4798)

Medical Practice Act Amendments

The bill amends the Medical Practice Act to provide for immunity for persons making a report to or assisting the Medical Practice Board, waives the physician-patient privilege with respect to Board proceedings, requires new licensure applicants to file their fingerprints, and provides that failure to comply with a subpoena may be considered unprofessional conduct.

• Public Act 144 (Enrolled Senate Bill 818)

Podiatrists Licensing Act Amendments

The act amends the podiatrists' licensing act to require fingerprints, to add the director of the Department of Licensing and Regulation to the licensing board, to provide immunity for persons reporting to the Board and waiving the physician-patient privilege.

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Soft Tissue Coverage of the Lower Extremities

By Robert J. Wilensky, MD
William C. Grabb, MD
Ann Arbor

General Discussion

The problems of soft tissue coverage of the lower extremity are well known. Poor blood supply, dependency and weight bearing all lead to problems. Good techniques are of prime importance due to the tenuous nature of the wounds. The basic writings of Sterling Bunnell[1] and Mont Reid[2] should be carefully considered and followed in regard to wound care. Morley's[3] admonition that,

> "The tension necessary to close the wound must never obstruct the blood circulation through the skin edges. Substitutes must be found either to relieve tension or to fill a defect. To attempt to force nature by straining on stronger and stronger sutures is to court disaster. It is far better to accept a defect than to increase it by using forceful measures."

As Brown[4] says, primary closure is perhaps an ideal to be aimed at, but can be achieved only when all factors contributing to success are present. Tension diminishes the blood supply and venous drainage, while undermining the skin edges aggravates this and a relaxing incision cutting off the blood supply, may be the last straw.[5] If skin loss is more serious, and edge to edge closure is impossible or unwise at the immediate or delayed primary operation, the place of other means of closure must be considered. It is with the various alternatives for wound closure that we will concern ourselves.

There are seven different ways to close wounds of the lower extremity, each of which will be discussed briefly in the order of preference:

1. Simple closure — mentioned only for completeness. If this can be done without undue tension, no serious consideration of alternatives need be undertaken.
2. Split thickness skin graft.
3. Local skin flap.
4. Muscle flap, followed by skin grafting on the muscle.
5. Muscle and overlying skin as a composite flap.
6. Distant skin flaps.
7. "Free" skin flaps, transferred by microvascular anastomoses of the direct cutaneous vessels of the flap to segmental vessels at another site.

The aim in therapy should be to select the method which will afford the greatest likelihood of success, be the most simple, and incapacitate the patient for the shortest period possible.

Skin Grafting (Figure 1)

Ponten[6] discussed the treatment of chronic venous ulcers of the leg. He covered 178 ulcers in 113 patients with large split thickness skin graft with excellent results in 62.5%, good results in 15.8%, and poor results in 21%. A technique of radical excision and delayed grafting was used. Patients were confined to bed for 10 days post-grafting with the extremity elevated and it was noted that when patients were allowed up earlier than this, multiple bleeding points were visible within the grafts.

Interestingly enough, not all agree with this standard technique of bedrest and elevation after skin grafting. Bodenham and Watson[7] reported on 25 patients with lower extremity skin grafts allowed out of bed in 24 to 48 hours. A firm foam pad for pressure was held in place by a crepe (Ace) bandage. Three failures occurred in patients with skin grafts placed over a joint. The patients had the advantages of bathroom use and at least the theoretical advantage of reduction of the likelihood of deep vein thrombosis.

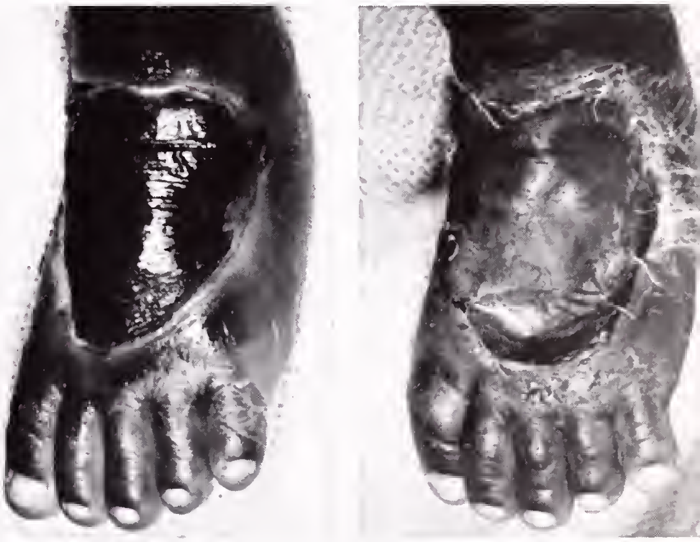

Figure 1. Skin loss foot secondary to I.V. infiltration. A, before; B, after successful application split-thickness skin graft.

The authors are with the Section of Plastic Surgery, Department of Surgery, University of Michigan Medical Center.

A split thickness graft will provide acceptable cover even for the plantar weight bearing surface of the foot, providing there is adequate (0.5 to 1.0 cm.) soft tissue present over the bone. A split thickness skin graft will not be acceptable if applied directly over weight bearing bone.

Hynes[8] has described the use of the dermis graft. This involves taking a thin split thickness skin graft from the donor site, then a full thickness graft from the same site and gingerly defatting it and placing it on the defect in a reversed manner (i.e., "fat side" externally and "dermis side" internally), and then placing the split thickness skin graft on the external surface. If the split thickness skin graft takes, this is fine; but if not, a second and thick split thickness skin graft would be placed on it at a later time. This technique has the advantage of providing some bulk as well as coverage. It takes better than a full thickness skin graft because the "dermal side" has more capillaries per area than the "fat side."

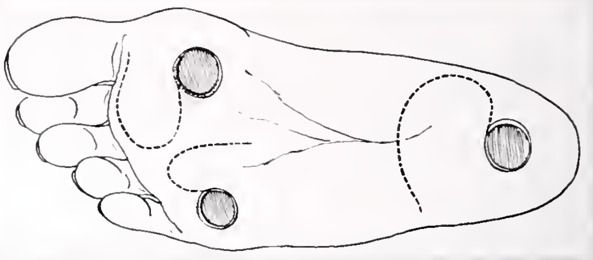

Figure 2. Some local flaps for use on foot from non-weight bearing areas. (Converse, vol. 4, p. 1819)

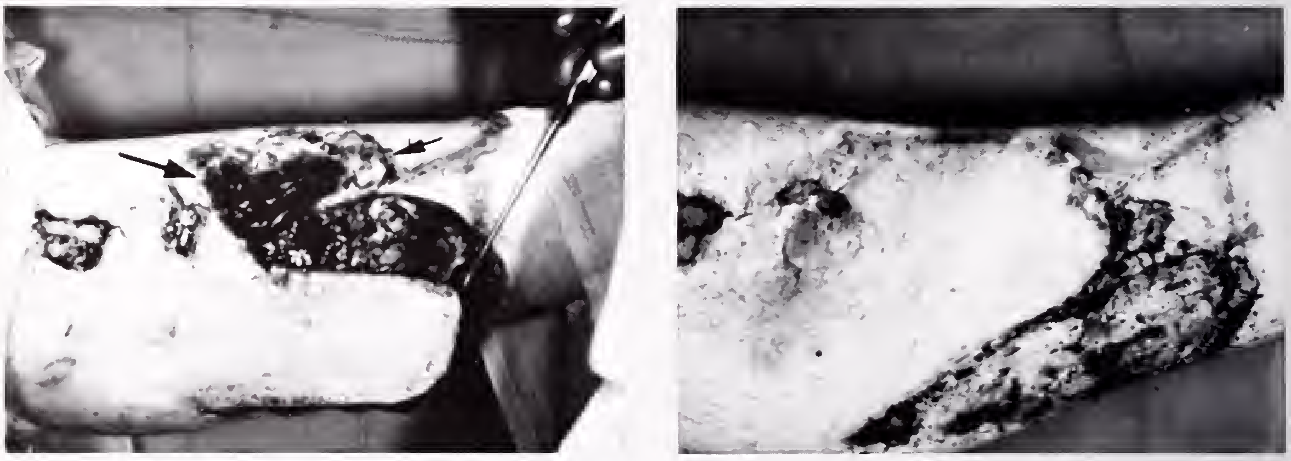

Figure 3. Traumatic soft tissue loss (original defect between arrows); A, before; B, after successful transfer of delayed local leg flap with split-thickness skin graft to secondary defect.

Bettman[9] has reported successful full thickness skin grafting directly on the bone of the skull, which is generally considered to be quite precarious. He noted that a good vascular supply is of significance, and this is often not present in the lower extremity, especially over the ankle or tibia. Stallings[10] found that when grafting on bare bone of the calvarium in the cat, the average take with a full thickness skin graft was 18%, a split thickness skin graft was 22%, and a reverse dermis graft was 42%.

Local Flaps

There has been a definite trend toward the use of a local flap for the coverage of lower extremity defects, (**Figure 2**), as opposed to a cross leg flap. The greater simplicity of local single and bipedicle flaps is a distinct advantage. Delaying these flaps for two or three weeks will increase their length at least 50%. We prefer to carry out this delay by making an incision along each side of the flap and undermining. Then at 10 days we start the staged division of the end of the flap, cutting about 1/3 of the distance at 2 to 3-day intervals until this end of the flap is completely divided.

Recently Bowen and Meares[11] reported the use of a delayed local flap in the distal third of the leg. They emphasize as the key to success adequate delay and a flap of generous dimensions, as there is inherent inelasticity of lower leg skin. **(Figure 3)**

Bilobed flaps have been used on the sole of the foot on numerous occasions with success. As these tissues are thick and relatively immobile, planning so as to place the secondary flap in an area of loose skin as the instep, side of the foot, or base of the toes is important. The radius of the secondary flaps must be at least as long as that of the primary flap.

The bipedicle sliding flap **(Figure 4)** was the first employed by Celsus (25 B.C.—50 A.D.), but the technique became known as the "French Method" because it was so often used by Nelaton and Ombredanne in World War I.[4] Hartwell[12] has reemphasized its use in large defects over the anterior tibia, with the flaps encompassing the entire

(Continued on page 594)

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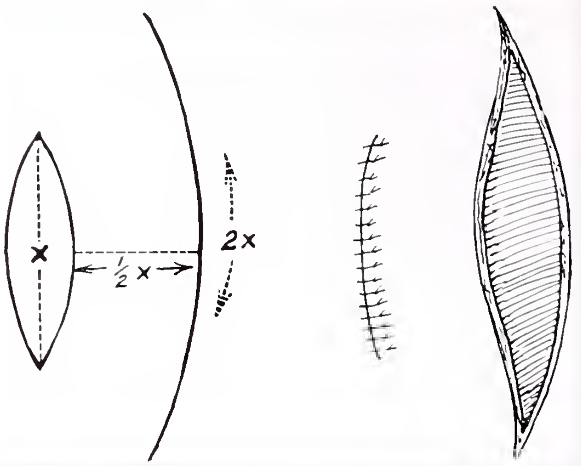

Figure 4. Design of double pedicle flap. Skin graft to cover secondary defect. (Converse, vol. 4, p. 1819)

leg, **(Figure 5-6)**. A split thickness skin graft to the secondary defect on the posterior calf is necessary. As El-Falaky[13] points out, these flaps have the advantage over local flaps in that they do not rely on immediately adjacent tissues with hard indurated margins of scar, and conversely they will bring in more blood supply, which a distant flap does not do. Small bipedicle flaps can be of use in the Achilles' tendon region.[14]

Snyder and Edgerton[15] have described the use of island neurovascular flaps in ulcerated anesthetic weight-bearing areas of the lower extremities. McCraw and Furlow have recently published a paper on a dorsalis pedis arterial flap.[16]

Distant Skin Flaps

This group includes cross leg flaps, open jump flaps, and tubed bipedicle flaps. Unilateral thigh-leg flaps have also been used to cover lower extremity defects, but their use should be confined to children with supply joints or in cultures where adults habitually sit in cross-leg or squatting positions, **(Figure 7)**. The risk of joint stiffness is considerable.

The cross-leg flap was first performed, successfully, by Frank H. Hamilton[4] in 1854 to provide coverage for a non-healing leg ulcer caused by a dirt cart injury two years previously. Billroth[4] in 1874 and Maas in 1885 also used this flap and left the donor area open as no dermatomes had yet been invented. Careful pre-operative planning is essential, both to insure an adequate size flap and also to provide one in a correct and maintainable position, **(Figure 8)**. The medial calf and anterior thigh are the most comfortable donor sites for the patient and also contain the most abundant arteries.[17]

Numerous authors have reported use of the

(Continued on page 600)

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Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

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Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

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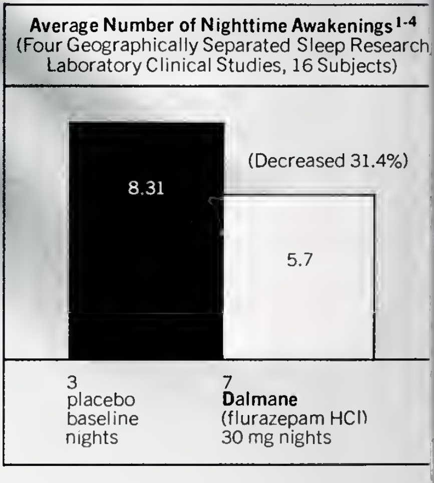

Average Number of Nighttime Awakenings[1-4]
(Four Geographically Separated Sleep Research Laboratory Clinical Studies, 16 Subjects)

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Dalmane (flurazepam HCl) is relatively safe, seldom causes morning "hang-over"..

…and is well tolerated. The usual adult dosage is 30 mg *h.s.*, but with elderly and debilitated patients, limit the initial dose to 15 mg to preclude oversedation, dizziness or ataxia. Evaluation of possible risks is advised before prescribing.

REFERENCES:
1. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971
2. Frost JD Jr: A system for automatically analyzing sleep. Scientific exhibit at the 24th annual Clinical Convention of the American Medical Association, Boston, Nov 29-Dec 2, 1970; and at the 42nd annual scientific meeting of the Aerospace Medical Association, Houston, Apr 26-29, 1971
3. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
4. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
5. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

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Opinion & Dialogue

Should a specially prepared package insert be made available to patients?

Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration

The idea of a so-called patient package insert has been around for a long time. Many physicians already use written instruction sheets to provide patients with information about the drugs they are taking. And some physicians give verbal instructions; but in too many instances these are what I call eye-glazing exercises. I have seen patients sit with glazed eyes listening to a rapid-fire lecture by a hurried physician who has 20 people out in his waiting room. These patients aren't given sufficient understanding and therefore do not follow instructions. So I think the idea of an official package insert for patients is a good one. Perhaps we should really think of this kind of information simply as an extension of drug labeling.

The benefits of patient involvement

Many physicians may not realize how frequently a patient obtains his drug information from Aunt Tillie or the next door neighbor. And this information is almost always bad or irrelevant to the case at hand. Furthermore, the incentive to go along with a prescribed program is slim if the only reading matter the patient receives, along with his prescription, is a bill.

As an educator I am impressed by the principle that the best way to get someone to do something is to involve him in the process. So the

Dr. James H. Sammons
Executive Vice President
of the American
Medical Association

I think there are advantages as well as some real disadvantages in a patient package insert. When you begin to use semi-medical or medical terms to describe complications or possible sequelae of disease or treatment, you may frighten the patient—particularly since the more highly sophisticated patient is not the one who is going to read the insert. The patient who will read it is the one most susceptible to fright and confusion by the language.

On the positive side, a package insert will probably give the patient better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove from the physician the need or obligation to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be warned of the possibility of serious side reactions—to know what the real dangers are. But it doesn't do a bit of good to indicate that a patient on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that fright engendered by the insert may possibly outweigh the potential good.

main purpose of drug information for the patient is to get his cooperation in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass information from physicians, medical societies, the pharmaceutical industry and centers of medical learning. The ultimate responsibility for uniform labeling must, however, rest with the Food and Drug Administration. There is nothing wrong with this agency saying, "this information is generally agreed upon and therefore it should be used," as long as our process for getting the information is sound.

Distribution of the information is a problem. In great measure it would depend on the medication in question. For example, in the case of an injectable long-acting progesterone, we would think it mandatory to issue two separate leaflets—a short one for the patient to read before getting the first shot and a long one to take home in order to make a decision about continuing therapy. In this case, the information might be put directly on the package and not removable at all. But for a medication like an antihistamine this information might be issued separately, thus giving the physician the option of distribution. This could preserve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socioeconomic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

Only the doctor can remove that fear by 20 or 30 minutes of conversation.

I'm not suggesting that we withhold any information from the patient because, first of all, it would be totally dishonest and secondly, it would defeat the very purpose of the insert. I do think that a patient on the birth control pill should know about the incidence of phlebothrombosis.

If you're going to tell a patient the incidence of serious adverse reactions, then you have to tell him that a concerned medical decision was made to use a particular medication in his situation after careful consideration of the incidence of complications or side effects.

Emotionally unstable patients pose a special problem

There are patients who, because of severe emotional problems, could not handle the information contained in a patient package insert. Yet if we are going to have a package insert at all, we just can't have two inserts. I think we might simply have to tell the families of these patients to remove the insert from the package.

Legal implications of the patient package insert

Just what effect would a patient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert

The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

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cross-leg flap in various locations and from various donor sites, 18-24, often without delays, (**Figure 9**). Various types of fixation including plaster, foam filled boxes[25], and interosseous pinning have been used.[26] It is our preference to use interosseous wiring with long Steinmann pins, with one pin in the proximal and one in the distal tibia, (**Figure 10**). The legs are then held off the bed in canvas slings, balanced by weights on overhead traction.[27]

Various complications have been discussed in relation to cross-leg flaps.[28] These include general problems as pulmonary embolus, deep vein thrombosis, flap necrosis, venous congestion of the donor leg secondary to interruption saphenous vein, hematoma, infection, pressure areas on either leg, and nerve lesions. The importance of proper planning, padding, and positioning must be strongly reemphasized. Start and Kaplan[29] reviewed cross-leg flaps in patients over age 50 and concluded that age, per se, is not a criterion for selection for this procedure. Millard[30] has used cross-leg flaps as a "crane" for subcutaneous tissue, then returning it to its original site after only one week and minimizing the time of double limb immobilization.

Tube pedicle flaps were developed in three different locations in 1916-17: V.P. Filatov, a Russian ophthalmologist, Hugo Ganzer, a German surgeon, and Sir Harold D. Gillies (then Major) at Sidcup, though Filatov probably was the first.[4] Its use, and the use of the open jump flap for soft tissue coverage in the lower extremity are dying out and are mainly of historic interest. Remember that a distant flap does not improve the blood flow in the recipient area, but must survive on that which is already present. Disadvantages include length of time for multiple procedures, short tubes causing difficulties in position, and significant scarring in the donor areas (**Figure 11**).

Muscle Flap Followed By Skin Grafting

Muscle has been used to ensure a rich blood supply to skin flaps. The blood vessels to the muscle course longitudinally through the muscle mass from an origin near the proximal end of the muscle. Ger[31-35] has been one of the early and main advocates of muscle transposition for use in open fractures, pretibial skin loss, and stasis ulcers. Removal of all damaged or diseased tissue is carried out, the appropriate muscle is rotated to fill the defect and a split thickness skin graft is placed over the muscle, (**Figures 12, 13, 14**). The advantages of this technique listed are:

1. the vascularity of the area is increased,
2. it interposes vascular, viable tissue between skin and bone,
3. it does not depend on vascularity of an injured area for nutrition, and

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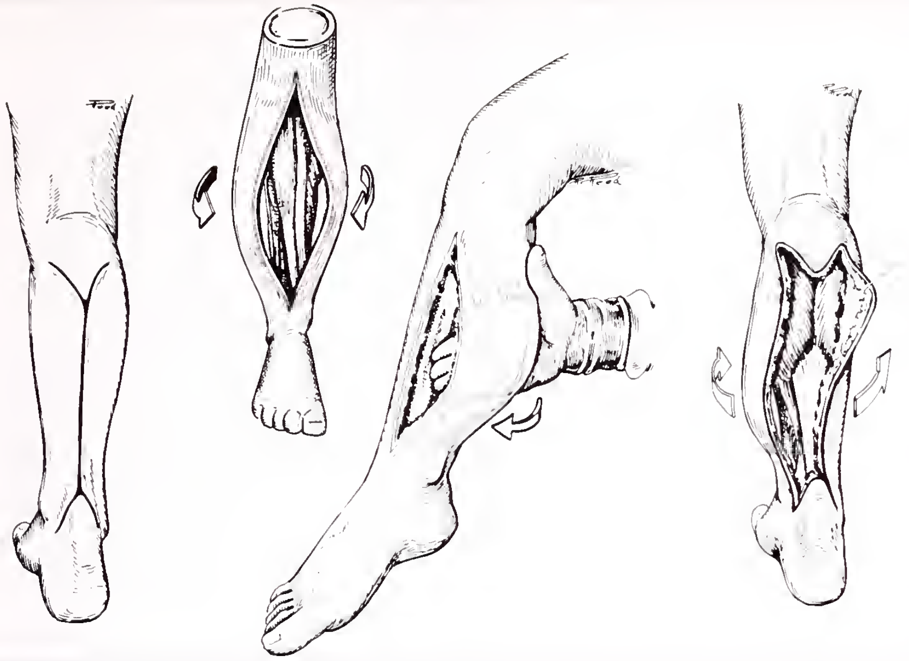

Figure 5. Raising the two bipedicle flaps on one leg. The flaps are raised between the crural fascia and the muscle.[12]

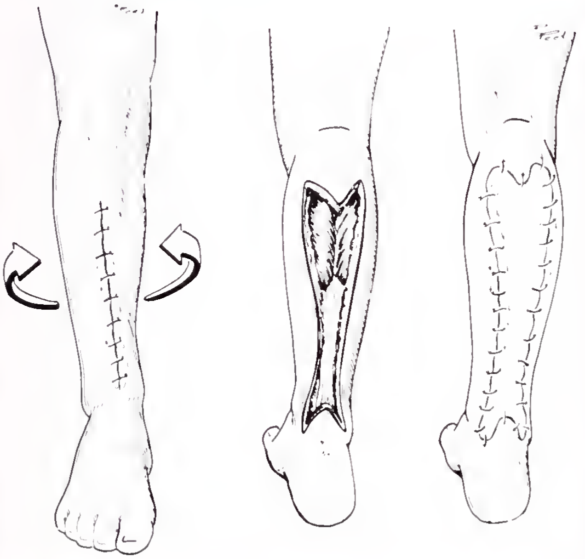

Figure 6. The two bipedicle flaps are moved anteriorly and sutured, one to the other. The resulting posterior defect is covered with a split skin graft.[12]

4. muscle is a better host for skin graft than bone.

It has been shown by EMG studies that contractile power persists in the muscles, thus while some atrophy occurs, the bulk of the muscle persists as such. Ger's article in 1971 *Journal of Trauma*[35] provides a good discussion of various muscles available for transposition into different areas, as does the article by Pers and Medgyesi.[36] Possible complications of this technique include loss of the skin graft, necrosis of the muscle (related to tension) and possible disability secondary to loss of function of the transposed muscle (which has not been significant).[37]

Muscle and Overlying Skin As A Composite Flap

The most recent advance in providing coverage in the lower extremity is to use a flap of muscle with its immediately overlying skin attached to it. The excellent vascularity of this flap is a major advantage. One end of the muscle remains attached to include the blood supply entering near the base which then courses through the length of the muscle sending perforator-musculocutaneous arteries upward to the overlying subdermal-dermal plexus of the skin. Because of the proximal base these flaps are most useful in covering more proximal defects.

Free Skin Flaps

Microsurgical techniques have opened new vistas in clinical and experimental surgery.[38] Unfortunately, microvascular surgery is not a technique for use on an irregular or occasional basis. The surgeon must utilize this technique on a regular basis in order to retain his dexterity and a realistic chance for success. The original clinical free flap transfers from the groin to the lower leg reported by Daniel, Williams, and Taylor, [39-41] **(Figures 15 and 16)**, were then followed by those of O'Brien,[42] and of Harii and Ohmori.[43] In order to utilize this technique, a detailed knowledge of the vascular

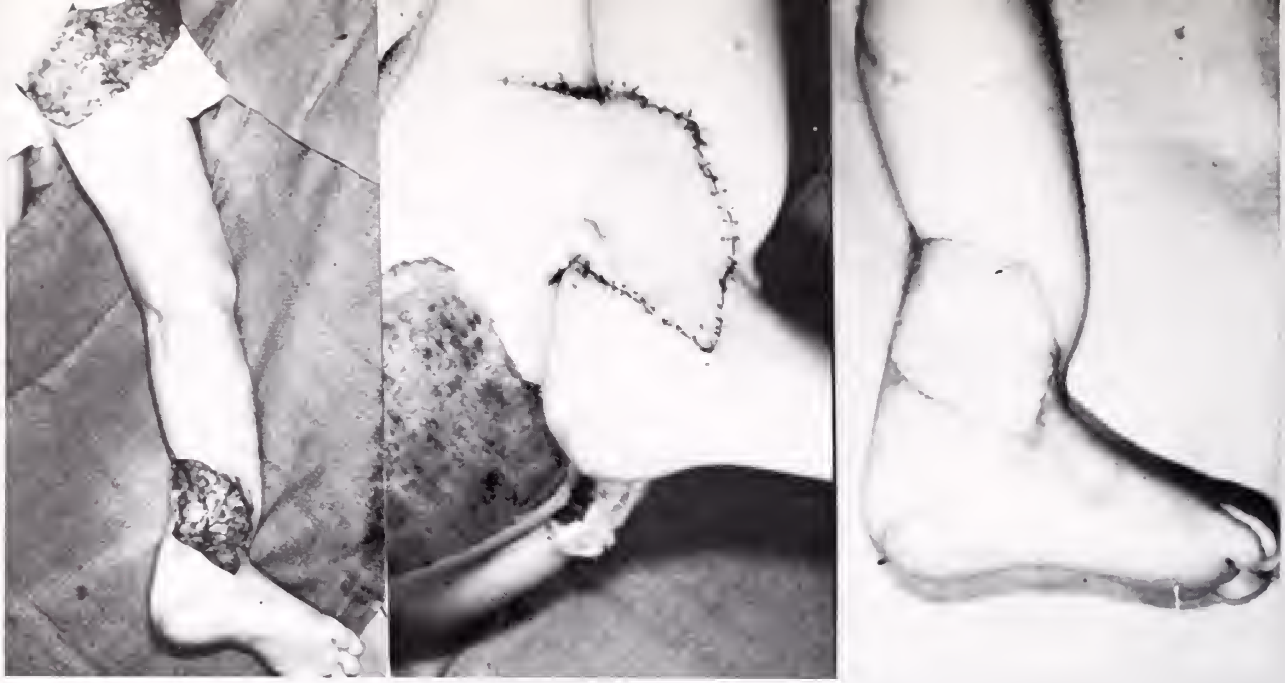

Figure 7. Unilateral thigh flap in a child with elevation flap (left), transfer (center), and after division (right).

anatomy of both the donor and recipient areas is necessary. The ideal donor site should have the following characteristics:[39]

1. a single artery and vein for anastomosis
2. anatomically constant vessels
3. cosmetically acceptable thickness
4. options of including bone and/or a nerve

For covering the lower extremity, possibilities include the skin overlying the superficial circumflex iliac artery and the superficial inferior epigastric, which are both direct cutaneous arteries. The superficial circumflex iliac appears to be the artery of choice because of its constant location and skin distribution.[39]

(Continued on page 604)

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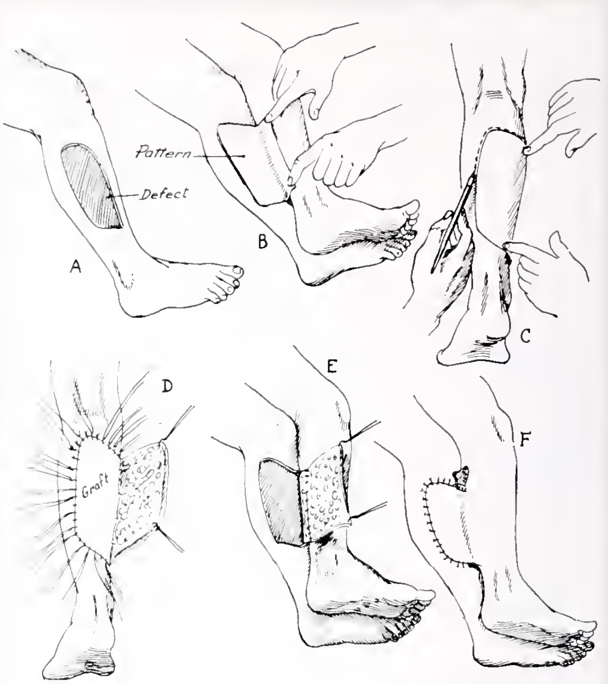

Figure 8. Technique of cross-leg flap. A, and B, creation pattern defect and C, transfer to donor leg; D, elevation flap and split-thickness skin graft to donor leg defect; E, small hinge flap sutured to scar cross-leg flap; and F, cross-leg flap in place. (Converse vol. 1, p. 62)

In all likelihood, more direct cutaneous arteries will be described in the near future as knowledge and awareness in this area grows, and investigators gain interest. One must, however, beware of attempting to utilize a "new and sophisticated technique" when something proven and less complex will do. As Escoffier[44] said a decade and a half ago, "Brilliant operative 'tours de force' as well as technical acrobatics will often bring greater satisfaction to the surgeon than to the patient, who is usually better off when more modest and simple procedures are applied to him."

Obviously, we cannot say which method of coverage will be best on your patient, or give a formula to determine this. We do hope that the various possibilities will all be considered and then the best one for your patient chosen on the basis of more complete knowledge. Conservative management of these patients may require one of the new techniques, but more often a simple and familiar operation will allow for the best cover in the shortest time with least patient expense and inconvenience.

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(Continued on page 606)

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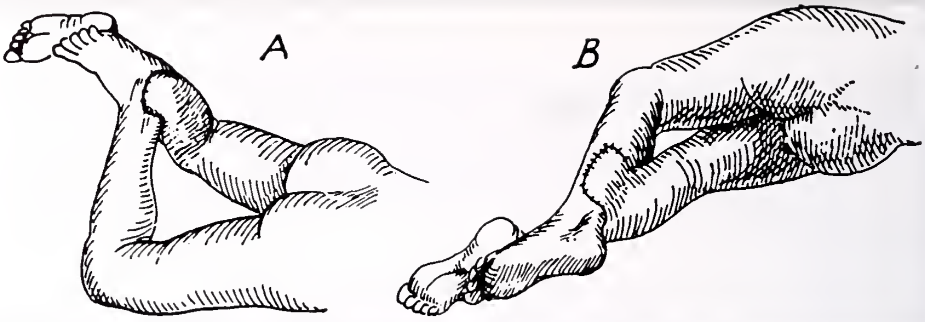


Figure 9. Cross-leg flap to cover heel, A; or posterior leg, B. (Converse vol. 1, p. 69)

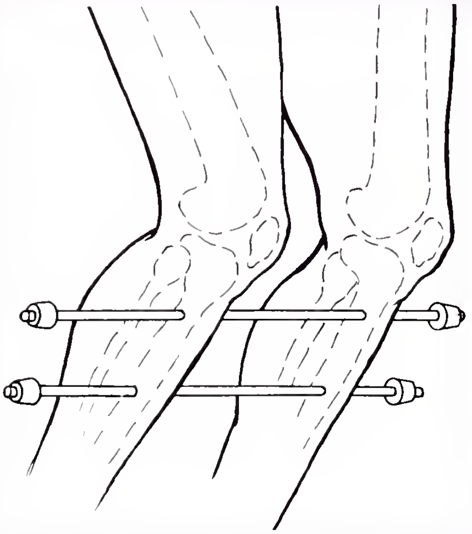


Figure 10. Steinmann pin fixation cross-leg flaps.[26]

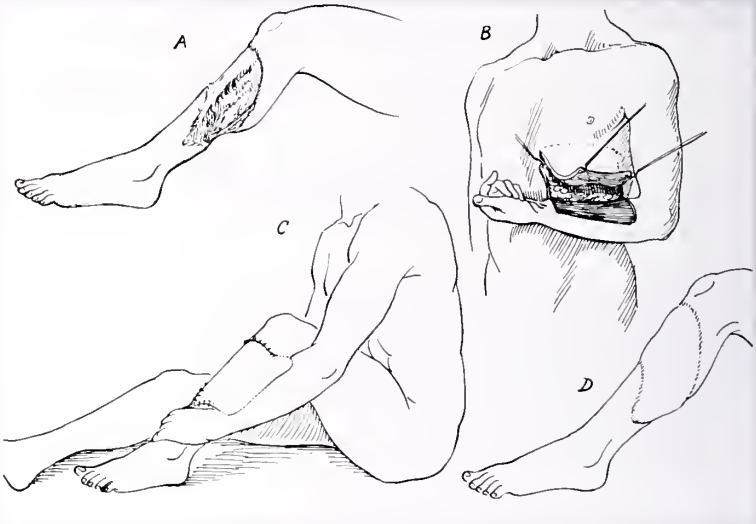


Figure 11. Typical steps in preparation and transfer open jump flap to lower extremity. (Converse vol. 4, p.1829)

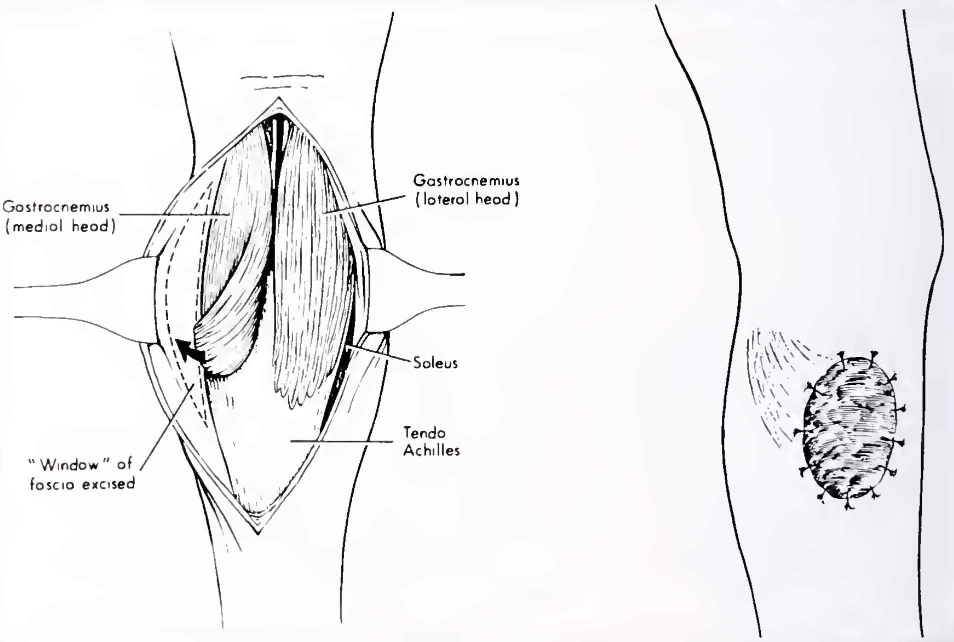

Gastrocnemius (medial head)
Gastrocnemius (lateral head)
Soleus
Tendo Achilles
"Window" of fascia excised

Figure 12. Elevation medial head gastrocnemius and rotation through "window" in fascia (left), suture of muscle to defect edges prior to split skin grafting (right).[35]

(Continued on page 609)

Putting out the fires of arthritic pain

Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed: "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."*

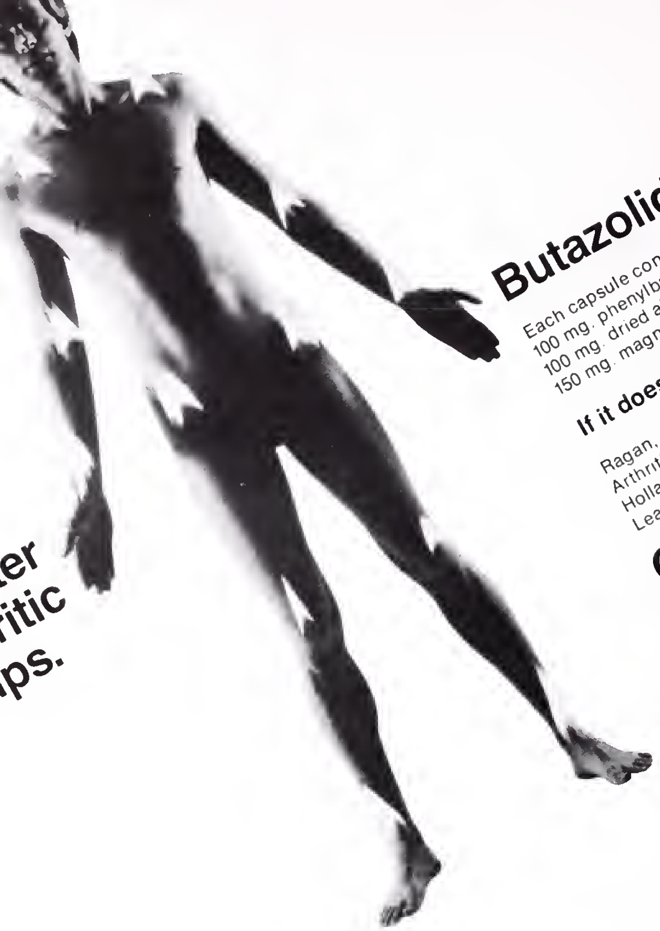
If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.

Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.



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100 mg. phenylbutazone USP
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150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.

Ragan, C.: The Clinical Picture of Rheumatoid Arthritis, in Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335.

Geigy

Fire fighter for arthritic flare-ups.

Important Note This drug is not a simple analgesic Do not administer casually Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc) before prescribing and at frequent intervals thereafter Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently Warn patients not to exceed recommended dosage Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema A one-week trial period is adequate. Discontinue in the absence of a favorable response Restrict treatment periods to one week in patients over sixty

Indications Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis

Contraindications Children 14 years or less, senile patients, history or symptoms of G I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias, renal, hepatic or cardiac dysfunction, hypertension; thyroid disease, systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy

Warnings Age, weight, dosage, duration of therapy, existance of concomitant diseases and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G I tract has occurred The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination Swelling of ankles or face in patients under sixty may be prevented by reducing dosage If edema occurs in patients over sixty, discontinue drug

Precautions. The following should be accomplished at regular intervals Careful detailed history for disease being treated and detection of earliest signs of adverse reactions, complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy The majority of these patients were over forty Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions This is a potent drug, its misuse can lead to serious results. Review detailed information before beginning therapy Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy, CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia, ulcerative stomatitis, salivary gland enlargement.
(B)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information.

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Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

BU 10259

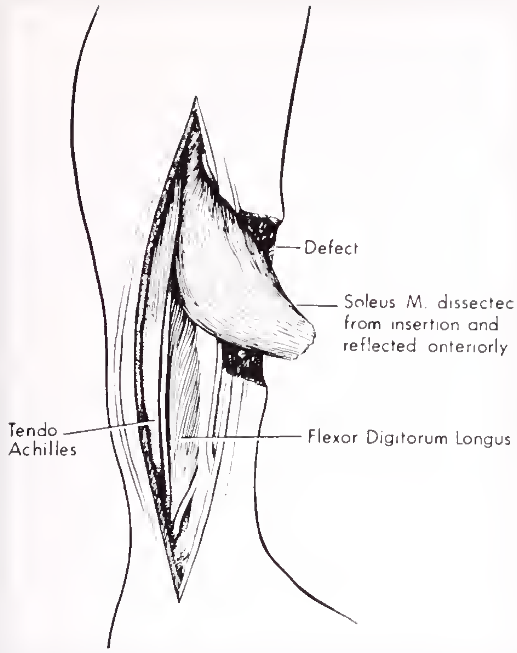

Defect
Soleus M. dissectec from insertion and reflected onteriorly
Tendo Achilles
Flexor Digitorum Longus

Figure 13. Mobilization soleus for rotation.[35]

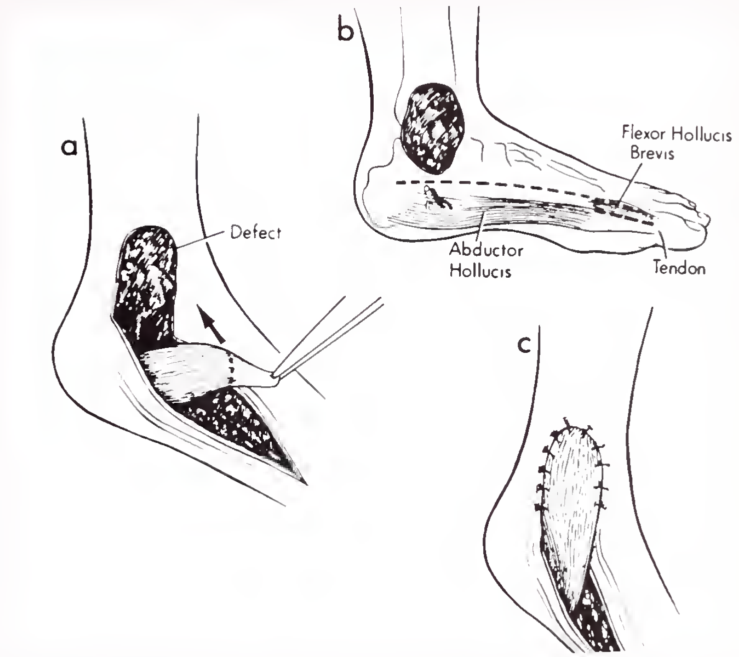
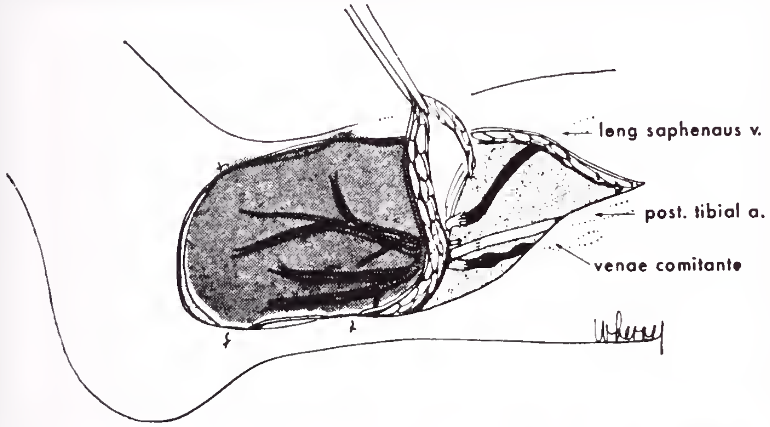

b
Flexor Hollucis Brevis
Abductor Hollucis
Tendon
a
Defect
c

Figure 14. Rotation of the abductor hallicus in foot defects; A, incision along medial aspect foot to proximal phalynx; B, mobilization muscle and excision tendon; C, muscle belly reflected superiorly with deep surface lying superficially and sutured to edge defect.[23]


leng saphenaus v.
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venae comitante

Figure 15. Diagram of microvascular anastomosis.

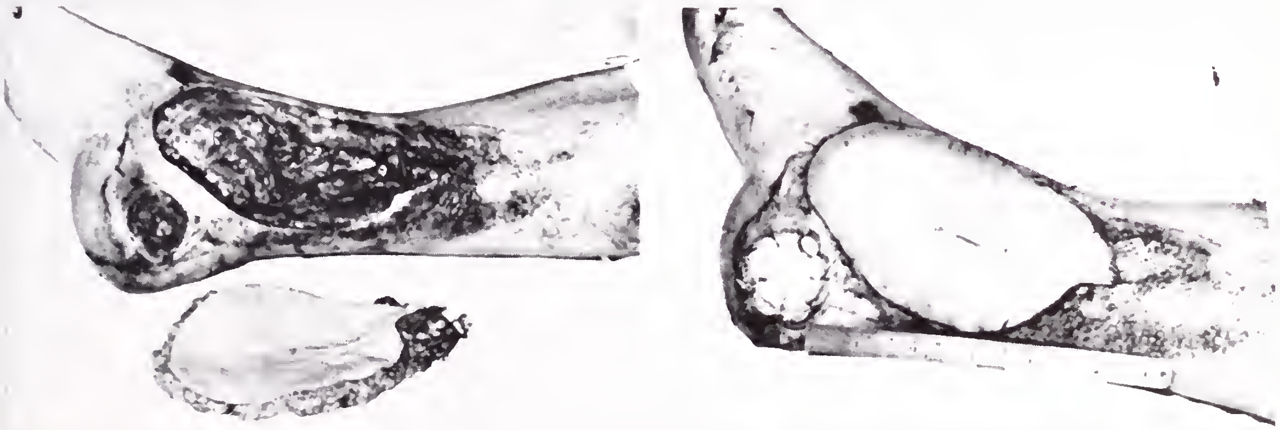

Figure 16. (Left) island skin flap, completely detached from the body; (right) the island skin flap in place after the microvascular anastomosis and suturing of the edges.[40]

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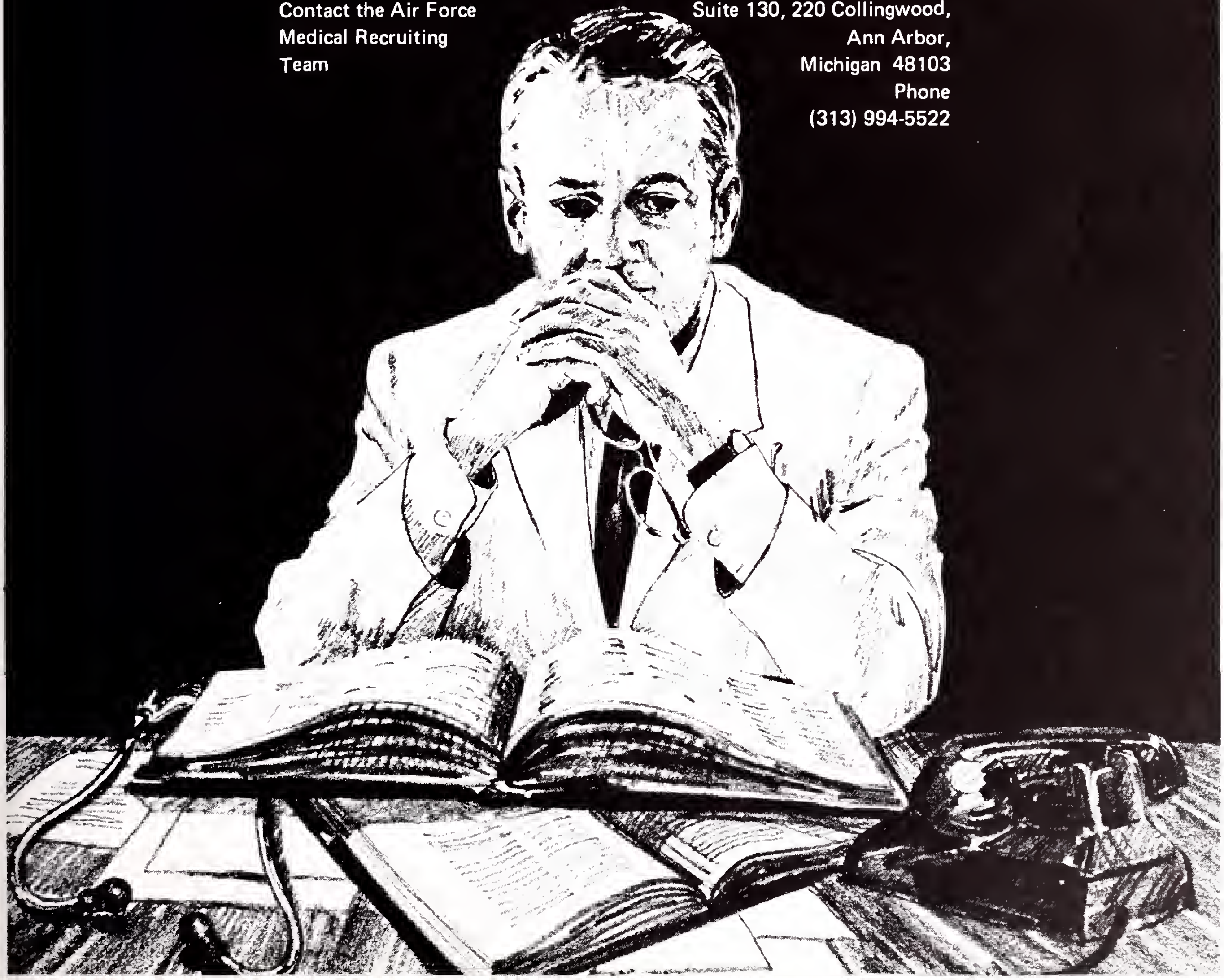

Letters

Clarification Of the New 50-Hour Requirement

To the Editor:

Concerning your Michigan Medigram, Volume 74 #20, July 17, 1975 regarding House Bill 4799 on 50 hours of continual education for re-registration.

According to your report the act is effective December 1, 1976 for registration in 1977. Does this mean that 50 hours of continual medical education be obtained in the first six months the act is in effect rather than on an annual (12 month) basis?

I realize that the mechanisms have not been developed and the MSMS Commission will do exactly that. I have many other concerns I hope my Medical Society will attempt to resolve.

Very truly yours,

James J. Horvath, M.D.
Detroit

(Editor's Note: Doctor Howath and other physicians may be assured that the 50 hours of credit are to be accumulated on an annual basis and not within the first six months after the new ruling goes into effect. The Michigan Medical Practice Board, however, has really just begun working out the details of implementing the new requirement.)

Wayne Med Students Express Appreciation

The following letters recently have been received at MSMS headquarters. They both are from Wayne State University medical students, but arise from separate incidents.

Just a quick note to thank you and the MSMS for all the support you have given us. The society's financial contributions continue to keep AMSA (formerly SAMA) a viable force at Wayne.

The work that you have done for us is deeply appreciated. Through you we have had much help on the MECO project, and we learn much about the larger cosmos of political economics which has so great an impact on the world in which we will practice.

Bruce K. Eagleson, President
WSU-AMSA

(Editor's Note: American Medical Student Association (formerly Student American Medical

When impotence due to
androgenic deficiency
is driving them apart
Android®-5 MUGETS BUCCAL Tabs
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Android®-25 ORAL Tabs
Methyltestosterone N.F. — 5, 10, 25 mg.

DESCRIPTION: Methyltestosterone is 17β-Hydroxy-17-Methylandrost-4-en-3-one. **ACTIONS:** Methyltestosterone is an oil soluble androgenic hormone. **INDICATIONS:** In the male: 1. Eunuchoidism and eunichism. 2. Male climacteric symptoms when these are secondary to androgen deficiency. 3. Impotence due to androgenic deficiency. 4. Postpuberal cryptorchidism with evidence of hypogonadism. Cholestatic hepatitis with jaundice and altered liver function tests, such as increased BSP retention, and rises in SGOT levels, have been reported after Methyltestosterone. These changes appear to be related to dosage of the drug. Therefore, in the presence of any changes in liver function tests, drug should be discontinued. **PRECAUTIONS:** Prolonged dosage of androgen may result in sodium and fluid retention. This may present a problem, especially in patients with compromised cardiac reserve or renal disease. In treating males for symptoms of climacteric, avoid stimulation to the point of increasing the nervous, mental, and physical activities beyond the patient's cardiovascular capacity. **CONTRAINDICATIONS:** Contraindicated in persons with known or suspected carcinoma of the prostate and in carcinoma of the male breast. Contraindicated in the presence of severe liver damage. **WARNINGS:** If priapism or other signs of excessive sexual stimulation develop, discontinue therapy. In the male, prolonged administration or excessive dosage may cause inhibition of testicular function, with resultant oligospermia and decrease in ejaculatory volume. Use cautiously in young boys to avoid premature epiphyseal closure or precocious sexual development. Hypersensitivity and gynecomastia may occur rarely. PBI may be decreased in patients taking androgens. Hypercalcemia may occur, particularly during therapy for metastatic breast carcinoma. If this occurs, the drug should be discontinued. **ADVERSE REACTIONS:** Cholestatic jaundice • Oligospermia and decreased ejaculatory volume • Hypercalcemia particularly in patients with metastatic breast carcinoma. This usually indicates progression of bone metastases • Sodium and water retention • Priapism • Virilization in female patients • Hypersensitivity and gynecomastia. **DOSAGE AND ADMINISTRATION:** Dosage must be strictly individualized, as patients vary widely in requirements. Daily requirements are best administered in divided doses. The following is suggested as an average daily dosage guide. **In the male:** Eunuchoidism and eunuchism, 10 to 40 mg.; Male climacteric symptoms and impotence due to androgen deficiency, 10 to 40 mg.; Postpuberal cryptorchism, 30 mg. **HOW SUPPLIED:** 5, 10, 25 mg. in bottles of 60, 250.

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REFER TO PDR

Association) chapters at Michigan's three medical schools recently were awarded annual $500 grants from MSMS, to be used at the chapters' discretion.)

This is just a short note of thanks to you and MSMS for allowing me to participate in this year's convention. I found the convention most interesting and the people most cordial. Overall, it was both an enjoyable and educational experience. I hope to be able to return again next year.

Thanks again,

Bill DuBois II
WSU-AMSA Chapter
Delegate, 1975 MSMS Annual Session

U-M Hospital Has Record Budget

Inflation and professional liability insurance premiums are major factors in a record budget of nearly $75 million for The University of Michigan Hospital for 1975-76. The U-M Regents have approved the budget which is $8.5 million over the previous year. They also approved a room service rate increase averaging nine per cent.

Thanks from MSIM To MSMS Bureau

MSMS has received a letter of thanks from the secretary treasurer, Michigan Society of Internal Medicine, for the excellent work of the MSMS Bureau of Economic Information in compiling and reporting the results of the MSIM 1975 Fee Survey. The MSIM board authorized the MSMS Bureau to use the data from the survey as it sees fit.

Independent Businessmen Oppose National Solution To Insurance Problem

Nationally, 61 per cent of independent businessmen are opposed to a federal program to solve the professional liability insurance crisis, according to a recent release of the National Federation of Independent Business, Inc. The NFIB polled the businessmen on a bill before Congress by Sen. Gaylord Nelson of Wisconsin, which would establish a medical malpractice reinsurance program for claims over $25,000. Sixty-three per cent of the Michigan businessmen polled were against such a national solution.

Anabolic Stimulant
Increased Muscular Tone
Osteoporosis

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Ethinyl Estradiol	0.005 mg
Methyltestosterone	1.25 mg
L-lysine	100 mg
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Iron (from Ferrous Sulfate)	2.82 mg
Vitamin A	2,500 U.S.P. Units
Vitamin D	250 U.S.P. Units
Thiamine Mononitrate	2.5 mg
Riboflavin	2.5 mg
Ascorbic Acid	25.0 mg
Folic Acid	0.1 mg
Vitamin B-12	1.5 mcg
Methionine	12 mg
Choline Bitartrate	15 mg
Inositol	10 mg
Calcium Pantothenate	2.5 mg
Pyridoxine	0.25 mg
Copper (from Copper Sulfate)	0.25 mg
Zinc (from Zinc Oxide)	0.25 mg
Iodine (from Potassium Iodide	0.075 mg
Calcium (from Dicalcium Phosphate	72.5 mg
Phosphorus (from Dicalcium Phosphate)	55 mg
Potassium (from Potassium Sulfate)	2.5 mg
Manganese (from Manganese Sulfate)	0.5 mg
Magnesium (from Magnesium Sulfate)	0.5 mg

ACTION AND USES — DOSAGE: 1 tablet after breakfast and supper, or as required. In females, 3-week courses of therapy are recommended followed by a 1-week rest period. Withdrawal bleeding may occur during the rest period. **PRECAUTIONS:** Administer cautiously to female patients who tend to develop excessive hair growth or other signs of masculinization. **CONTRAINDICATIONS:** Patients in whom estrogen or androgen therapy should not be used, as in carcinoma of the breast, genital tract, or prostate, and in patients with a familial tendency to these types of malignancy. **AVAILABLE:** Bottles of 100 and 500 tablets. Rx only.

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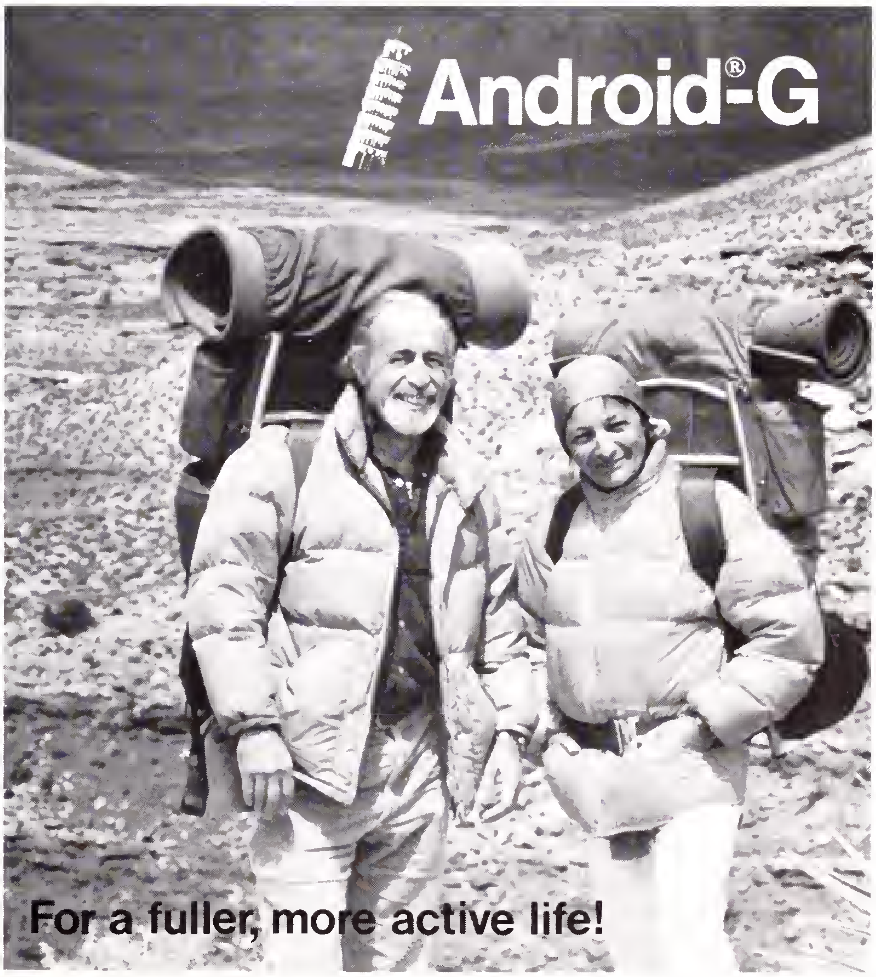
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PURDUE DEFIBRILLATION CONFERENCE: The Biomedical Engineering Center of Purdue University will hold a conference in Lafayette, Indiana from October 1 to 3, 1975 covering the practical and clinical aspects of cardiac defibrillation. The speakers have been selected based upon their positions as leaders in their respective fields. The topics to be discussed include clinical, basic science, and engineering aspects of electrical defibrillation as it pertains to the needs of physicians, nurses, emergency medical personnel, hospital engineers, equipment manufacturers, and research scientists. The state-of-the art of defibrillation techniques will be presented and examined critically and a major goal of this three-day conference will be to integrate all available technology for optimization of ventricular defibrillation. The registration fee of $95.00 includes proceedings and two luncheons. For further information, please contact: Division of Conferences and Continuation Services, Stewart Center, Purdue University, West Lafayette, Indiana 47907. Phone: (317) 749-2533.

OBY/GYN — Academic Position-Full time. Responsible for undergraduate and graduate training in combined community hospital programs, affiliated with MSU College of Human Medicine. Contact D. Mulkey, M.D., Assistant Dean — Flint Campus, 302 Kensington, Flint, Mi. 48502. Telephone: (313) 234-6653.

MEDICAL EQUIPMENT FOR SALE, 4 examining tables and cabinets, 1 Ritter universal table, examining lights, diatheramy, USN equipment, business machine, filing cabinets, desks, etc. Will sell part or sell whole as a fully equipped office. This area needs two or three qualified physicians. Contact: W. E. Larson, MD, P.O. Box B, Cheboygan, Michigan.

GENERAL INTERNIST: Board certified or eligible — Join young internist in growing practice next to enlarging hospital in northern Michigan. New office. Write — Charles J. Dumanois, M.D., 828 Oak Street, Cadillac, Michigan 49601

THE DEPARTMENT OF NEUROLOGY, Wayne State University, Detroit, Michigan is in the process of appointing Residents to the training program at the first and second postgraduate level. Positions are available for July 1, 1976. Interested physicians should apply to the program director. Dr. John Gilroy, Professor and Chairman, Dept. of Neurology, Harper Hospital, Detroit, Michigan 48201.

THE PATIENT'S ANTICONVULSANT LEVELS SERVICE of the Epilepsy Center of Michigan receives by mail blood samples from more physicians each month. PALS currently can determine levels of Dilantin, Mysoline, Zarontin, Tegretol and phenobarbital. Contact: Epilepsy Center of Michigan, 10 Peterboro, Detroit 48201 for PALS request/instruction forms.

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TEXAS, El Paso. Career-oriented FT emergency physicians with trauma experience wanted for new, dynamic, well equipped hospital in high growth area. Guar. Min. $50,000 with growth potential. Hospital base site for paramedic station. Contact: T. Shelton Powers, M.D. or Lorene Watson, Medical Staff Secretary, Eastwood Hospital, 10301 Gateway West, El Paso, Texas 79925, (915) 592-0261, Ext. 1222.

CHRISTIAN PHYSICIANS wanted to join group interested in part time foreign mission service. Preferably Internists and General Practitioners. Contact Doctor Marsa at (313) 693-6238 or 693-8258.

PHYSICIAN. House physician for medium size hospital in Detroit area responsible for Emergency, Inpatient and First Aid Room care. Physicals, Employee Health Clinic and Pre-Employment physicals. Excellent employee benefits. Opportunity to have small practice with office space furnished. Forward Curriculum Vitae to Box #6, 120 West Saginaw Street, East Lansing, Michigan 48823.

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In Memoriam

Donald R. Brasie, MD
Roscommon

Former Flint physician for 50 years, Donald R. Brasie, MD, died June 12 at the age of 76. Doctor Brasie, a past president of the Genesee County Medical Society, was a fellow of the American College of Surgeons. He also was a member of the Flint Academy of Surgery and the Industrial Medical Association. He was graduated from the University of Michigan Medical School and had been affiliated with Hurley and McLaren General Hospitals in Flint.

Charles N. Hoyt, MD
Port Huron

Charles Noye Hoyt, MD, chief of psychiatry at Port Huron Hospital, died July 12 at the age of 61. Doctor Hoyt was a former family physician and was also affiliated with Mercy Hospital, Port Huron. He was past president of the St. Clair County Medical Society and had served as an MSMS Councilor.

Bernard G. Keizer, MD
Newberry

Former MSMS delegate Bernard Gregg Keizer, MD, died June 30 at the age of 51. Doctor Keizer was a graduate of Wayne State University School of Medicine and was affiliated with Newberry State Hospital and Helen Newberry Joy Hospital, Newberry. He was a psychiatrist and had been employed with the U.S. Public Health Service for 13 years.

James M. Louisell, MD
Houghton

The director of the Houghton County Mental Health Clinic, James M. Louisell, MD, died July 25 at the age of 65. Doctor Louisell had practiced psychiatry for nearly 20 years in southwestern Michigan before moving to the Upper Peninsula. He was a former superintendent of the Ft. Custer State Home for retarded children. He was a graduate of the University of Minnesota medical school.

William J. McElroy, MD
Lewiston

Retired former group medical director with the Chrysler Corporation, William James McElroy, MD, died July 6 at the age of 66. Doctor McElroy was graduated from Hahneman Medical College and was a fellow of the Industrial Medical Association. He also was a member of the Michigan Industrial Medical Association, Detroit Industrial Physicians Club and the Engineering Society.

George W. Morrison, MD
Detroit

Ophthalmologist George W. Morrison, MD, died July 7 at the age of 79. Doctor Morrison was affiliated with St. Joseph Mercy Hospital, Detroit. He formerly practiced in Toronto and Jackson, Mich. and was a graduate of Dalhousie University, Halifax, N.S.

Thomas H. McEachern, MD
Formerly of Ann Arbor

Thomas H. McEachern, MD, former head of pediatrics at St. Joseph Mercy hospital, Ann Arbor, died July 19 in Hendersonville, N.C. He had been on the staff of the Oteen, N.C. Veterans Hospital since 1973. He was 71. Doctor McEachern served three years with the Indian Health Center in Chinle, Ariz., and was a member of the American Indian Association. He had been a clinical associate in the U-M Medical Center department of pediatrics for many years and headed the Mercy Hospital pediatrics department for more than 20 years. In 1967 he received the U-M Distinguished Alumnus Award. He was a diplomate of the American Board of Pediatrics and a fellow of the American Academy of Pediatrics.

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Michigan Medicine Volume 24, Number 30, October 1975

With the 1975 MSMS Scientific Meeting close at hand, this issue details many of the features of the outstanding and varied program. For descriptions of scientific sessions, seminars and special activities, see page 619, 634, 654, 656-658.

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Neither the editors nor the state medical society will accept responsibility for statements made or opinions expressed by any contributor in any article or feature published in the pages of the journal. In editorials, the views expressed are those of the writer and not necessarily official positions of the society.

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President's Page

1975 MSMS Scientific Meeting Nov. 11-13 Offers Study, Culture, Politics; Come!

Brock E. Brush, MD
MSMS President

One of the best opportunities for Michigan physicians to bring themselves up to date in their many fields is just weeks away.

Plans for the 1975 MSMS Annual Scientific Meeting November 11-13 are complete, with this year's expanded three-day meeting offered and arranged by 30 state specialty societies, under MSMS sponsorship.

This issue of *Michigan Medicine* is full of information about the meetings, speakers, subjects and extra-curricular activities scheduled for the first time at the Michigan Inn in Southfield, just off the I-96 expressway on the northwest side of Detroit.

The event is planned to offer something for every physician and is a major manifestation of MSMS's renewed commitment to provide and accredit the continuing medical education of the state's physicians. Special invitations also are being extended to medical students, nurses and medical assistants.

There is no registration fee for the MSMS Scientific Meeting, and MSMS will assist physicians with overnight accommodations.

How can the doctor lose, with all these free discussions and activities going on in a new and handsome inn, with the easiest access and parking accommodations close to the metropolitan area? Continuing education credit will be awarded as a bonus.

Noted medical experts will join prominent Michigan physicians to describe the latest techniques and discoveries. Their clinical topics will range from the treatment of pain to the detection of drug sensitivity, from hypertension to progress in neuroendocrinology.

Broader topics will include historical perspectives in the development of child care, status of Michigan emergency medical services legislation, engineering for air and water quality and the suicidal physician.

Outstanding presentations are planned on the expectations and fulfillment of health care for women; political decision-making related to medical issues, with C. Patrick Babcock, Governor's executive assistant for legislative affairs; and the National Health Planning and Resources Development Act, with Jay G. Endsley, director Office of Health and Medical Affairs.

In addition, the Michigan Doctors Political Action Committee will meet, a practice management seminar is scheduled and a Doctor's Art Show will be staged. The exhibition hall will feature approximately 40 scientific and technical displays and ample time will be allowed for doctors to browse between meetings.

If you haven't circled the dates on your calendar yet, do so now and join your fellow MSMS members in Southfield November 11-13.

See additional articles on the MSMS Scientific Meeting on pages 634, 654, 656-658.

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Warnings: Estrogen therapy should not be given to women with recurrent chronic mastitis or abnormal mammograms except, if in the opinion of the physician, it is warranted despite the possibility of aggravation of the mastitis or stimulation of undiagnosed estrogen-dependent neoplasia.

The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, retinal thrombosis, cerebral embolism and pulmonary embolism). If these occur or are suspected, estrogen therapy should be discontinued immediately.

Estrogens may be excreted in the mother's milk and an estrogenic effect upon the infant has been described. The long range effect on the nursing infant cannot be determined at this time.

Hypercalcemia may occur in as many as 15 percent of breast cancer patients with metastases, and this usually indicates progression of bone metastases. This occurrence depends neither on dose nor on immobilization. In the presence of progression of the cancer or hypercalcemia, estrogen administration should be stopped.

A statistically significant association has been reported between maternal ingestion of diethylstilbestrol during pregnancy and the occurrence of vaginal carcinoma in the offspring. This occurred with the use of diethylstilbestrol for the treatment of threatened abortion or high risk pregnancies. Whether or not such an association is applicable to all estrogens is not known at this time. In view of this finding, however, the use of any estrogen in pregnancy is not recommended.

Failure to control abnormal uterine bleeding or unexpected recurrence is an indication for curettage.
Precautions: As with all short acting estrogens, the following precautions should be observed:

A complete pretreatment physical examination should be performed with special reference to pelvic and breast examinations.

To avoid prolonged stimulation of the endometrium and breasts in climacteric or hypogonadal women, estrogens should be administered cyclically (3 week regimen with 1 week rest period—withdrawal bleeding may occur during rest period).

Because of individual variation in endogenous estrogen production, relative overdosage may occur which could cause undesirable effects such as abnormal or excessive uterine bleeding, mastodynia and edema.

Because of salt and water retention associated with estrogenic anabolic activity, estrogens should be used with caution in patients with epilepsy, migraine, asthma, cardiac, or renal disease.

If unexplained or excessive vaginal bleeding should occur, reexamination should be made for organic pathology.

Pre-existing uterine fibromyomata may increase in size while using estrogens; therefore, patients should be examined at regular intervals while receiving estrogenic therapy.

The pathologist should be advised of estrogen therapy when relevant specimens are submitted.

Because of their effects on epiphyseal closure, estrogens should be used judiciously in young patients in whom bone growth is incomplete.

Prolonged high dosages of estrogens will inhibit anterior pituitary functions. This should be borne in mind when treating patients in whom fertility is desired.

The age of the patient constitutes no absolute limiting factor, although treatment with estrogens may mask the onset of the climacteric.

Certain liver and endocrine function tests may be affected by exogenous estrogen administration. If test results are abnormal in a patient taking estrogen, they should be repeated after estrogen has been withdrawn for one cycle.
Adverse Reactions: The following adverse reactions have been reported associated with short acting estrogen administration:
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possible diminution of lactation when given immediately postpartum
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If the patient has not menstruated within the last two months or more, cyclic administration is started arbitrarily. If the patient is menstruating, cyclic administration is started on day 5 of bleeding. If breakthrough bleeding (bleeding or spotting during estrogen therapy) occurs, increase estrogen dosage as needed to stop bleeding. In the following cycle, employ the dosage level used to stop breakthrough bleeding in the previous cycle. In subsequent cycles, the estrogen dosage is gradually reduced to the lowest level which will maintain the patient symptom-free.

Postmenopause—as a protective measure against estrogen deficiency-induced degenerative changes (*e.g.* osteoporosis, atrophic vaginitis, kraurosis vulvae)—0.3 mg. to 1.25 mg. daily and cyclically. Adjust dosage to lowest effective level.

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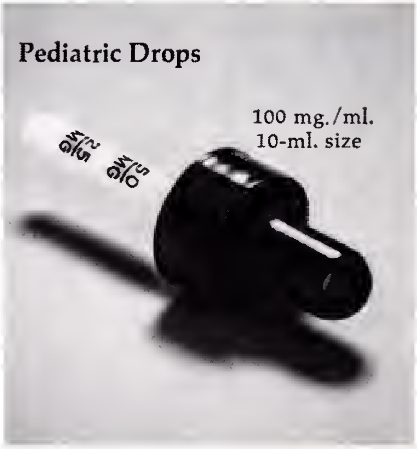

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Diagnosis and Management Of the Common Congenital Cardiac Defects

With Special Emphasis on the Newborn

By Gordon M. Folger, MD
Detroit

It has been a relatively short period since the time that congenital cardiac malformations left the realm of the anatomist's "drawing board" and entered that of the clinician. Indeed, in terms of therapy, this took place in 1939 when Gross reported ligation of the patent ductus arteriosus.[1] A mere six years later, Blalock and Taussig reported a surgical method of palliating individuals with certain forms of cyanotic cardiac malformations, principally tetralogy of Fallot.[2] Total correction of intracardiac defects by methods allowing direct vision of the anomaly (first reported as closure of ventricular septal defect by Lillehei in 1955[3]) fully opened the door to the cure of heart disease for many. Prior to this era, accurate anatomic descriptions of nearly all the congenital malformations of the cirulatory system were available in the literature. The excellent compendium of many of these defects by Maude Abbot in 1936[4] represented one of the first attempts to draw clinical attention to the problem. The first truly clinical treatise was the text by Helen Taussig which first appeared in 1947.[5] Since, most advances have been in terms of sophistication of diagnostic and therapeutic techniques.

The purpose of the present communication is to review the current situation concerning cardiovascular disease in the newborn and small infant. For it is here that significant advances have been and are continuing to be made which drastically change the previously gloomy outlook for these patients. This is where understanding can reap great benefits in the salvage of individuals with complex malformations of the circulation. It is here also that diagnosis and management of these defects is found to be most difficult, much more so than in the older child. Furthermore, it is this age group that most texts have failed to give separate attention, prefering to include these individuals with those of older age and similar defects.

TABLE I

Clinical indications of significant congenital heart lesions in the newborn

1. cyanosis
2. tachypnea
3. pulse volume reduction
    (a) symmetrical-throughout
    (b) isolated-femoral/pedal
4. precordial impulse hyperactivity
5. absence of second sound splitting
6. pallor
7. heart murmur

Recognition of the Stressed Newborn

Certain clinical findings in the newborn indicate the presence of cardiovascular disease. As is evident from *Table 1*, cyanosis and tachypnea are considered the most important. The mere presence of a murmur is the least important, for to dwell upon one such finding, present in many newborns and which may not indicate pathology, is to be misled. Indeed, varying types of murmurs from the closing ductus in the newborn[6] are widely recognized, as are murmurs due merely to a condition of normal pulmonary vessel angulation in the neonate.[7] On the other hand the presence of a murmur may be important and is not to be dismissed lightly. Murmurs indicative of pathologic conditions may emanate from the same areas as in older children, ie: abnormal semilunar valves, subvalvular obstructions and defects allowing intracardiac shunting of blood.

The most important single finding in the newborn indicative of a cardiorespiratory pathologic state is cyanosis. Excluding the acrocyanosis of the very newly born, true "central" cyanosis nearly always indicates hypoxemia which may be secondary to a pulmonary abnormality or a cardiovascular defect. Although, if untreated, the biochemical outcome of each is usually the same,[8] the differentiation of the two must be established quickly as management is totally different. The best clinical method of differentiation applicable in the newborn nursery is the administration of oxygen to the suspect infant.[9] This is best done

---

Doctor Folger is director, Division of Pediatric Cardiology, and acting director, Division of Neonatology, Henry Ford Hospital, Detroit.

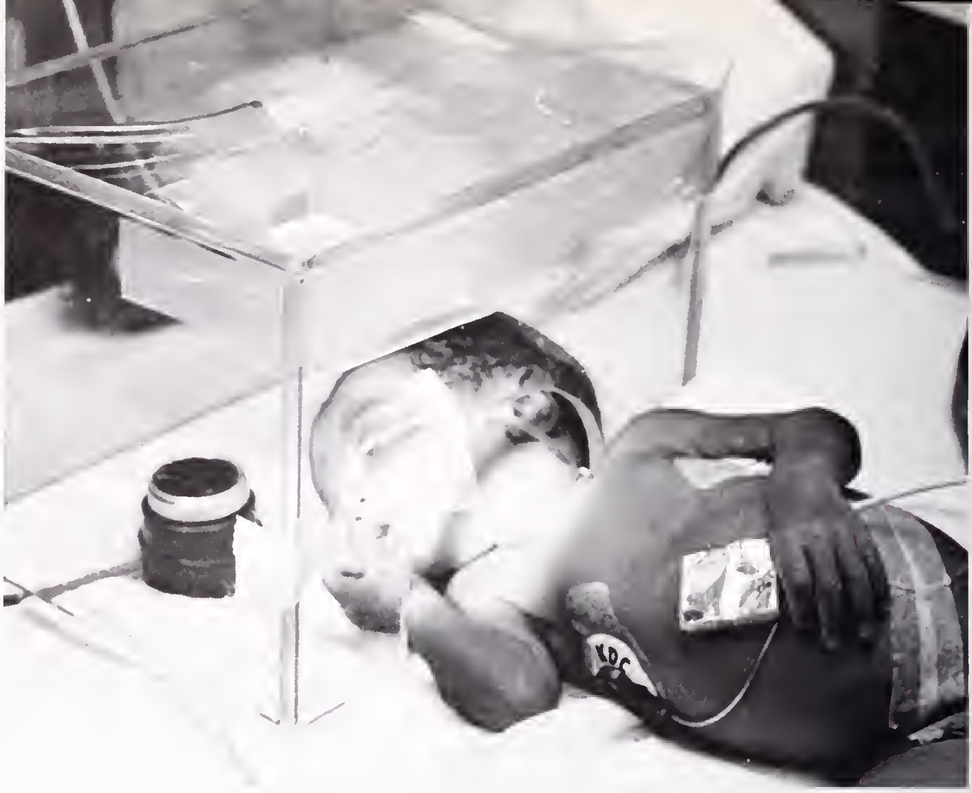


Fig. 1: Infant receiving oxygen by oxyhood. The device is of simple construction and allows rapid concentration of oxygen when the entry hole for the head of the infant is occluded by the apron seen in this illustration to be secured to the top of the hood.

with the infant's head placed in a hood *(Fig. 1)* which is well sealed to prevent oxygen loss. With an oxygen sensor in the hood the concentration is brought to 100% for 10-15 minutes. Analysis of the partial pressure of oxygen (pO_2) before and immediately following oxygen administration will reveal a significant pO_2 increase when the problem is pulmonary, with little or no increase if cardiac. The test is best performed with blood sampling via an umbilical arterial catheter, which we employ routinely in all distressed infants, or by arterialized capillary blood collected anaerobically via deep subcutaneous puncture of the heel.[10] If pO_2 cannot be measured, often visual improvement in the color of the infant with oxygen is sufficient to indicate pulmonary pathology with the absence of improvement indicating a cardiovascular mechanism.[8] Several other causes for cyanosis bear mention and include metabolic abnormalities such as hypoglycemia and hypocalcemia. Central nervous system disease such as hemorrhage or infection and sepsis are among those prominent and all may be eliminated fairly easily. It must be remembered that these causes are often, if not always, associated with depression of the infant; whereas cardiopulmonary disease is usually seen in otherwise vigorous infants.

Tachypnea, too, may have several causes, the most likely cardiovascular or pulmonary. As before, several guidelines usually allow differentiation. Thus, the pink, tachypneic newborn with labored respiration usually has pulmonary pathology such as the respiratory distress syndrome. On the other hand, the tachypnea associated with an acyanotic cardiovascular abnormality in the older child is rarely seen in a neonate under one week of age. Furthermore, the infant with cyanotic forms of heart disease, although often noticeably tachypneic, rarely has the increased respiratory effort with retractions seen with the respiratory distress syndrome.

The presence and volume of the peripheral pulses may be of great importance but in the newborn are variable even under normal circumstances. As a general rule, if the pedal pulses are present and the brachial or axillary are easily felt we consider the pulses normal. Distinctly feeble pulses throughout call for continuous and close observation of the infant, especially if tachypnea with or without cyanosis also is present. This combination is most often seen with the hypoplastic left heart syndrome.[11] Distinct absence of only femoral and pedal pulses, of course, should call attention to the possibility of aortic coarctation. They require similarly close observation of the infant.

The precordial impulse in the newborn infant should be quiet. Obvious hyperactivity reflects cardiac hyperactivity indicative of a cardiac volume overload which in the newborn, especially when pulse volume is feeble, suggests the hypoplastic left heart syndrome.[11]

The character of the second heart sound (S2) indicates the status of the semilunar valves, principally the pulmonic. Although difficult, distinct splitting of S2 should be ascertained in the distressed infant. Absence of this sign indicates ab-

TABLE II

Treatment of metabolic acidemia with sodium bicarbonate

How degree of acidemia determined	Amount necessary to correct acidemia	Treatment routine
Laboratory analysis of arterial or arterialized blood	BE x wgt. (Kg) x 0.3 (formula)	1. Total amount as a bolus I.V. — most useful if acidemia as determined by laboratory analysis is severe ($pH < 7.10$ $BE > -15$)
Estimation without laboratory support	1.0 — 2.0 mEg/Kg	2. ½ of calculated amount as bolus, remainder administered I.V. rapidly over extended period (30-60 minutes)

BE = base excess

sence or hypoplasia of the pulmonary valve such as occurs with pulmonary atresia or extreme stenosis.

Pallor, although usually associated with a state of collapse such as occurs with sepsis, acute blood loss or metabolic derangement, also may be found with infants with extreme cardiovascular disease. An example is hypoplastic left heart syndrome,[11] in which a shock-like state may be present. Pallor may be seen as well in such conditions as neonatal myocarditis.

Although each and every one of these findings in any infant may indicate cardiovascular disease, it must be emphasized that the presence of hypoxemia as indicated by cyanosis is the most severe problem facing the newborn and his physician. The cyanotic infant should be considered an acute emergency and the cause established and treated.

The Physiologic Abnormality: Recognition and Management

Hypoxemia

The end result of hypoxemia of any cause has been dealt with in detail in a previous article.[12] In review, the fetus has thrived in low oxygen tensions[13] in the range of pO_2 40 mm. Hg. to the instant of birth. This has caused somewhat lower pH values as well. At the same time, energy requirements have been low and this situation has been "physiologic." With birth and its attendant rapid increase in energy demands, if blood oxygenation does not promptly rise to normal values, hypoxemia results. As this occurs, a metabolic acidemia, due principally to increases in lactate concentration ensues and this, not the hypoxemia per se, results in death. Thus, in the cyanosed newborn one must be constantly aware of the metabolic consequence, lactic acidemia and, at first awareness, prepared to treat it.

Treatment consists in increasing oxygenation of the blood, effective by the administration of appropriate amounts of oxygen when and where pulmonary pathology exists. However, in the infant with cyanotic forms of cardiac defects, increasing inspired oxygen, as previously pointed out, has no effect on systemic oxygenation. The exclusion of oxygenated blood from the systemic circulation is anatomically unchanging in the child with a malformed heart, very unlike the situation where lung disease without cardiovascular malformation is present. Thus, the emergency treatment of the infant acidemic because of cyanotic heart disease consists of directly, though temporarily, neutralizing the acidemia by the use of bicarbonate until his cardiac defect can be palliated or corrected *(Table II)*.

Congestive Heart Failure

Should the problem be congestive heart failure, in the presence or absence of cyanosis, anticongestive measures obviously must be taken. Cardiac failure, however, is not common under one week of life.

The mechanism resulting in decompensation is, of course, reduction in the ability of one or both ventricles to deliver to its circulation all of the blood presented to it. Right heart failure usually occurs as a result of an extreme obstructing lesion without an effective pathway for the right ventricle to shunt that blood, which cannot be pumped to the lungs, to the left side of the heart. This is an unusual situation in the newborn in view of the fact that the foramen ovale is usually adequate for preventricular shunting of a volume excess at the time of birth, should it occur. Left heart failure, which is most common on the basis of a sizable amount of left to right shunting but may occur with obstructive abnormalities as well, is rare in the newborn.

Failure of cardiac decompensation to occur in newborns secondary to left to right shunting lesions, a common cause of failure in the older child, is due to the condition of the pulmonary vascular

Table III

Common Acyanotic Congenital Cardial Malformations

Mechanism	Left to right shunt	Obstruction without shunt
Defect	Ventricular Septal Defect	Aortic Stenosis
	Atrial Septal Defect	Pulmonary Stenosis
	Patent Ductus Arteriosus	Coarctation of Aorta

tree. In utero the pulmonary vessels have remained constricted, acting to curtail flow through the developing but functionally insignificant lung.[14] With birth and the onset of respiration this condition rapidly changes over the first minutes of life, but does not reach levels which allow free flow of blood for several days and may not attain normal adult levels for several months.[15,16] During this period when this constriction causes significant increase in resistance to blood flow, left to right shunting at any level will generally be insufficient to cause overloads of a magnitude necessary to result in myocardial failure although exceptions occur. With the passage of time and "normalization" of the pulmonary vessels, flow occurs with less resistance and potential shunting defects become significant. Thus, inherent in developing understanding of the cause of left to right shunting lesions, is recognition that the magnitude of the shunt depends on two factors: the anatomic size of the shunting defect, and the condition of the bed through which the shunted blood is to flow, ie: the pulmonary circuit. If of small volume, the left to right shunt imposes relatively unimportant or physiologically acceptable burdens on the left heart. As shunt volume increases (either because of a large defect or declining vascular resistances or in many instances both), so does the left heart overload. This culminates in some children in left heart failure manifest as pulmonary edema if the shunt is at ventricular or great vessel level. From a therapeutic standpoint, it must be reiterated that heart failure in the newborn is rarely the emergency situation that hypoxemia is.

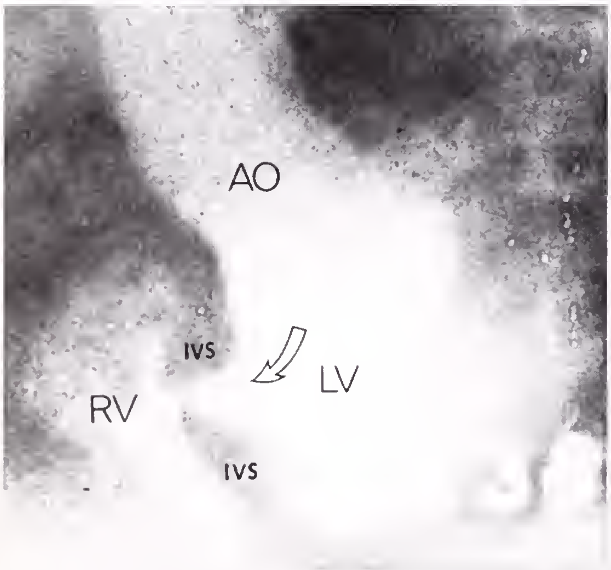


Fig. 2: Cineangiocardiogram of IVSD. Injection into left ventricle (LV). The right ventricle opacifies by way of the clearly defined septal defect (arrow) as it tunnels through the interventricular septum (IVS). The aorta (Ao) opacifies normally.

The Specific Lesion: Recognition and Management

Acyanotic **(Table III):**

1. *Interventricular septal defect (IVSD)* is the most frequently occurring malformation of the cardiovascular system.[17] Unless altered by an associated abnormality either within or outside the heart, the physiologic derangement produced is a left to right shunt. This, of course, results in increased blood flow to and through the lungs, placing a burden on that side of the heart which becomes the final recipient of the overabundant flow, invariably the left atrium and ventricle.

Diagnosis in the newborn differs little from that in the older child once a left to right shunt has been established. The murmur, usually associated with a thrill, is pansystolic and located along the lower aspect of the left sternal border. The second heart sound may be difficult to hear due to the length of the murmur which ends almost synchronously with its inscription. The chest radiogram reveals pulmonary vascular engorgement and an enlarged heart, with the left atrium and ventricle and pulmonary artery as well the usually-involved structures. The electrocardiogram invariably shows, as it always does in the newborn, right ventricular hypertrophy. But left ventricular hypertrophy, unusual for the neonate, is also present. Left atrial hypertrophy is often not seen initially.

The diagnosis is completely established during cardiac catheterization and angiography *(Fig. 2)*. The therapeutic approach varies somewhat with the physiologic embarrassment. In the absence of overt congestive heart failure, neither anticongestive measures nor surgery need be instituted. If failure is present, active anticongestive measures should be pursued. Surgery is indicated only if failure cannot be controlled.

2. *Patency of the ductus arteriosus (PDA)* is invariably present at birth becoming pathologic only when closure at the anticipated time fails to occur. Like the IVSD, it is always a left to right shunting lesion never productive of cyanosis in

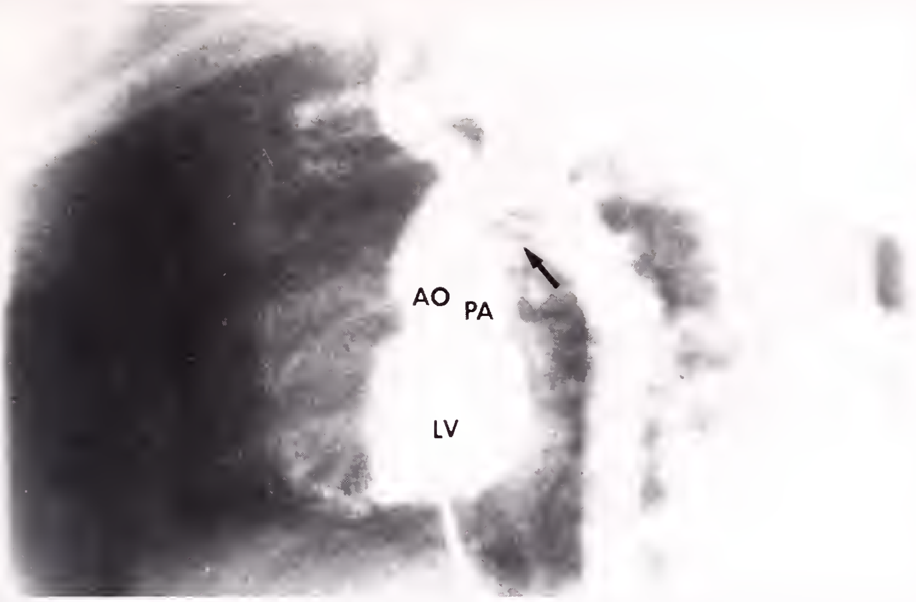


Fig. 3: Angiogram of PDA. Injection is into left ventricle (LV). Aorta (Ao) has opacified normally. The pulmonary artery (PA) has become opacified by way of the PDA (arrow).

the absence of complicating malformations. The physiology of the shunt is identical to that of IVSD, the shunt rarely being of magnitude to result in congestive heart failure in the first days of life because of the persistence of the fetal vasoconstriction in the pulmonary arterial tree. Murmurs from the ductus in the first hours of life are not unusual, but do not exhibit the commonly described continuous character. This appears only as the fetal pulmonary vascular resistance subsides and is heard rarely in the first days of life. One of the clinical clues to the diagnosis of this defect is the peripheral pulses which may show increase in volume and a "bounding" character under the fingers. As with IVSD, the diagnosis by the electrocardiogram and chest radiography is difficult until left to right shunting of a magnitude to cause left heart overloading and increased pulmonary vasculature is present. If symptomatic, diagnosis by cardiac catheterization may be necessary in the newborn period *(Fig. 3)*.

3. *Interatrial septal defect (IASD)* only rarely causes symptoms and positive findings in the neonatal period. Occasionally a shunt of such magnitude sufficient to cause heart failure does occur.[18] In such situations, a pulmonic systolic murmur is usually present and the electrocardiogram shows evidence of extreme right ventricular hypertrophy. Unlike IVSD and PDA the cardiac overload in IASD is right sided as is decompensation should it occur. The classical findings of IASD such as wide fixed splitting of the second heart sound may be difficult to appreciate in the neonate making it a less reliable finding here than in the older child. Cardiac catheterization is usually essential to establish a correct diagnosis in early life.

4. *Aortic stenosis (AS)* is an uncommon cause of difficulty in the newborn period being as it is usually well tolerated for long periods of time, often many years. However, it occasionally is of such severity as to cause neonatal heart failure. When this occurs it is closely akin to the abnormality of hypoplastic left heart syndrome, to be discussed with the cyanotic abnormalities, with the aortic valve, left ventricle and aorta often underdeveloped. The classical physical and laboratory findings of AS seen with older children are usually absent. Indeed, the typical presentation when symptomatic in the newborn period is tachypnea associated with generalized feeble pulses and a short ejection systolic murmur. An ejection click and thrill are usually absent. The electrocardiogram generally shows left ventricular hypertrophy although right ventricular hypertrophy alone may be found. The radiograms reveal generalized cardiomegaly and, usually, pulmonary venous engorgement. When the infant has reached this stage he may become cyanotic. Cardiac catheterization with angiographic visualization of the left ventricle, aortic valve and the aorta are usually mandatory for ascertaining the diagnosis and the planning of management.

5. *Aortic coarctation* occuring as a single lesion also is generally well tolerated in infancy. The clinical diagnosis is usually ascertained easily once the ductus has closed, by virtue of reduced and delayed or absent femoral pulses. However, in the immediate newborn period, if ductal patency is present, and if the coarctation occurs proximal to ductal entry into the aorta, the elevated pulmonary arterial vascular resistance may allow descending aortic perfusion from the pulmonary arterial circuit with preservation of femoral

Table IV

Common Cyanotic Congenital Cardiac Malformations

Mechanism	Right to left shunt		Systemic-pulmonary circuit exclusion	Unitary circuit
	pre atrial	post atrial		
Defect	Tricuspid Atresia Pulmonic Stenosis Pulmonary Atresia	Tetralogy of Fallot	Transposition of Great Arteries	Hypoplastic Left Heart Syndrome

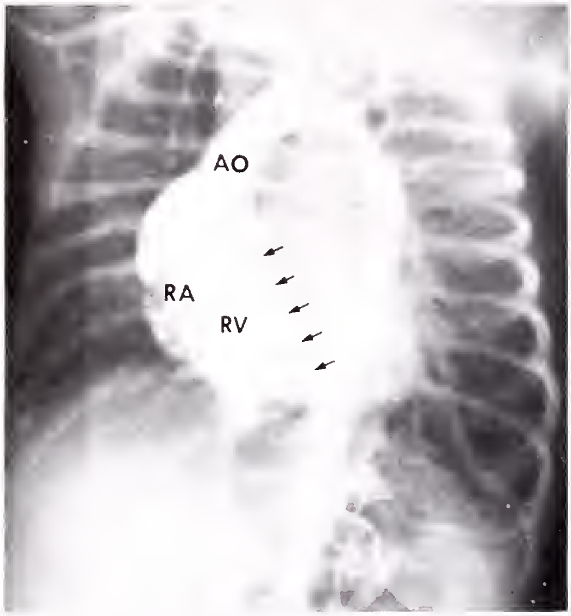


Fig. 4: Angiogram of TGA. Injection is into right atrium (RA). The aorta (Ao) opacifies from right ventricle (RV) to course otherwise normally. No opacification of structures to the left of the interventricular septum (arrows) or pulmonary artery is seen indicating no intracardiac mixing of blood and thus complete isolation of the lungs from the systemic circulation.

pulses. Congestive heart failure may occur. Only if it does is it necessary to perform cardiac catheterization and surgical intervention. The electrocardiogram and chest radiograms are usually not diagnostic.

6. *Pulmonary Stenosis (PS)* of severity to cause symptoms in the newborn infant is usually associated with cyanosis and is to be described with the cyanotic defects.

Cyanotic (Table IV)

As stated previously, recognition and treatment of the cyanotic malformations is of much greater importance than the acyanotic, principally because of the more precarious situation of the infant so affected. Their diagnosis and care is usually of such complexity as to ultimately require referral to a regional center.

1. *Transposition of the Great Arteries (TGA)* is to the clinician by far the most important cardiac lesion affecting the neonate from both a diagnostic as well as a treatment and salvage aspect. The defect itself is the single most common cause of neonatal cyanosis due to cardiovascular disease and the most common cause of symptoms in the newborn with cardiac malformations.[19] The anatomy is simple: there is complete reversal of the aorta and pulmonary artery in respect to the ventricle from which they arise — the aorta from the right and the pulmonary artery from the left ventricle. Thus, in the absence of one or more defects at atrial, ventricular or great vessel level, two separate circulations, each exclusive of blood from the other are present *(Fig. 4)*. The result is obviously extreme hypoxemia and survival often measured in hours from birth. The longevity obviously is increased when there is a mechanism of intermixing of the two circulations as by an ASD, IVSD, or PDA. As with many of the other defects covered and those to follow, the infant may be murmur-free.

Diagnosis is dependent initially upon suspicion and recognition of the problem. The baby is most often male and is usually of normal size, rarely underdeveloped. He may not appear ill other than manifesting deep cyanosis. The electrocardiogram is often of little or no help and may appear completely normal *(Fig. 5)*. The chest radiogram on the other hand is often helpful. Immediate treatment is imperative.

As soon as the condition is suspected by the presence of cyanosis and the suggestive chest radiographic feature of an ovoid heart on a narrow base or pedicle (egg-on-a-string appearance) *(Fig. 6)*, treatment of the almost invariably present acidemia should be instituted[8] and prompt referral to a regional center arranged. For no other treatment locally will be successful and delay in transfer will almost invariably result in increasing acidemia and death.

Treatment at a regional center will commence with definition of problem by cardiac catheterization *(Fig. 4)* followed by creation of an interatrial shunting orifice by means of a balloon atrial sep-

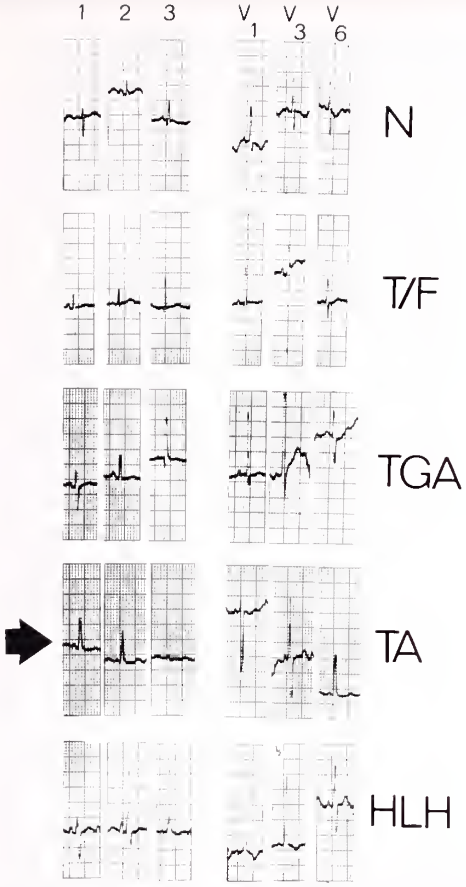


Fig. 5: Composite of electrocardiograms of common cyanotic defects with comparison with normal. Note striking similarity to the normal as seen with T/F and TGA, all showing a right axis deviation and right ventricular hypertrophy. Tracing of TA is strikingly dissimilar showing greatly lowered R waves in Lead VI and left axis deviation. Diagnostic changes with HLHS consist of slurred R wave in Lead V6 without Q wave indicating presence of right ventricle in all precordial leads and absence of any pattern of the left ventricle.

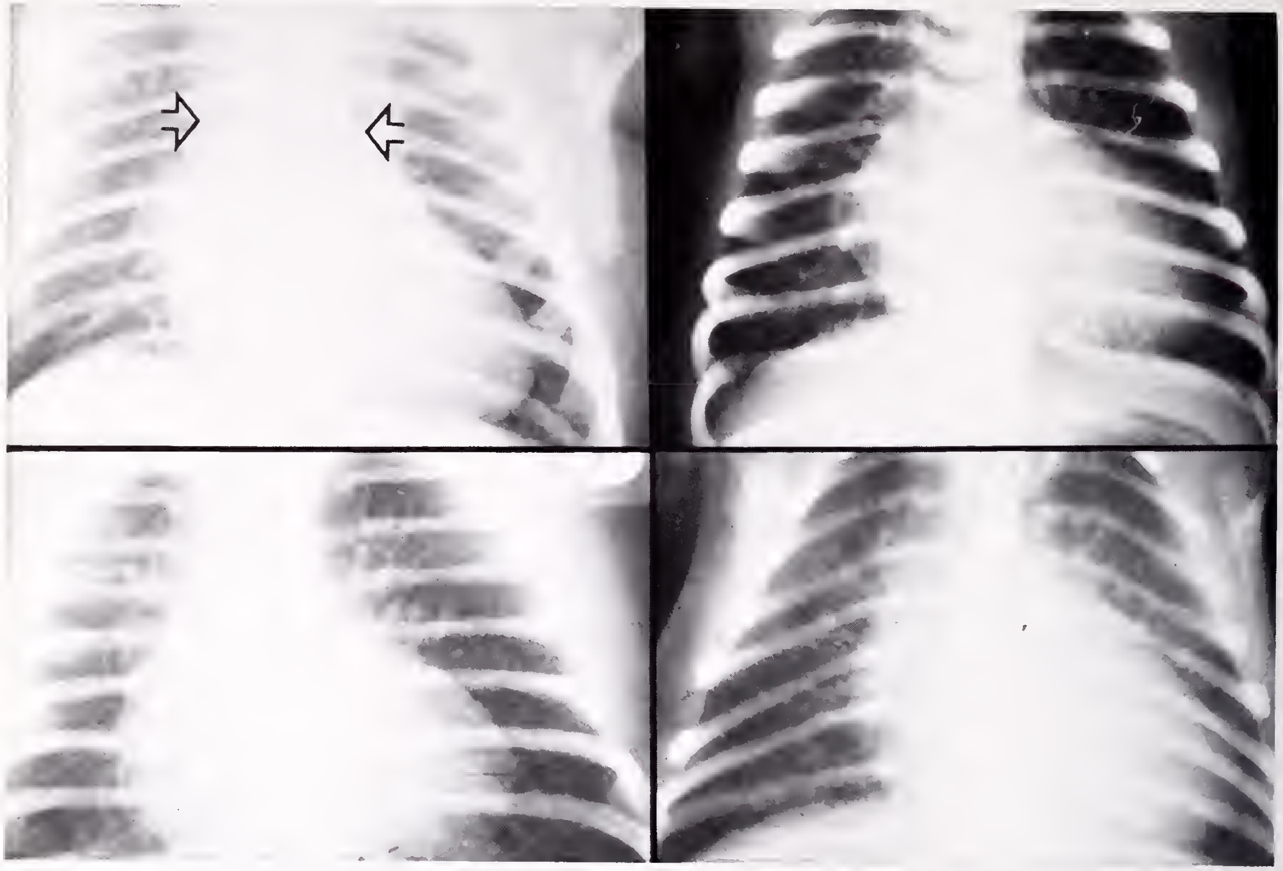
N = Normal
T/F = Tetralogy of Fallot
TGA = Transposition of Great Arteries
TA = Tricuspid Atresia

tostomy at the time of cardiac catheterization or, if this fails, surgical atrial septectomy. The improvement in systemic arterial oxygen saturation attending either of these procedures will partially alleviate the hypoxemia and usually the acidemia consequent to it.[8] With success by these techniques in the neonate, the infant will survive to a size suitable for complete correction surgically of the abnormality.

2. *Tetralogy of Fallot (T/F)*, although a more common lesion overall, rarely causes symptoms in the neonate.[20] Indeed, cyanosis is often absent in this period but, when present, it is just as serious a situation as with TGA. The condition may be easily suspected by virtue of the usual presence of a systolic murmur, even in the newborn although this is certainly not invariably so. The chest radiogram, if reasonably typical, may show the usually associated "boot-shaped" heart *(Fig. 6)* but again typical features should not be expected from any defect in the neonate. The pulmonary vasculature will appear underdeveloped peripherally, whereas it is usually abundant in the infant with TGA, a good differentiating point. The electrocardiogram may appear normal for this age, and, similar to TGA, not helpful in the diagnosis *(Fig. 5)*. As in TGA, acidemia will develop when hypoxia is significant, making rapid identification locally mandatory. Cardiac catheterization and angiography establish the exact nature of the abnormality *(Fig. 7)* with medical management or surgery predicated upon the findings.

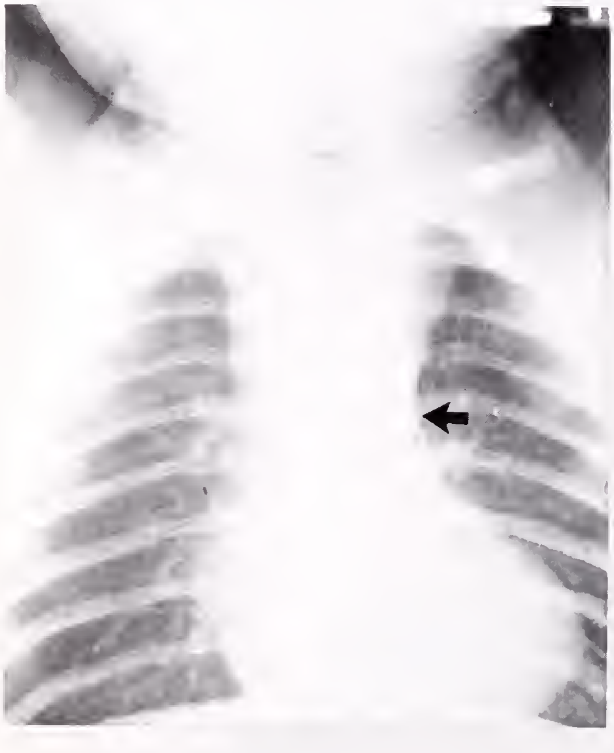
3. *The Hypoplastic Left Heart Syndrome (HLHS)* is second only to TGA in frequency in occurrence in the newborn. Its anatomy is that of atresia of both the aortic and mitral orifices or each separately with intact interventricular septum. Thus, the anatomy totally excludes the left ventricle from any function. Blood flow through the heart is by way of both atria to the right ventricle. From the right ventricle, blood enters the pulmonary circulation normally and the systemic by way of a huge patent ductus arteriosus *(Fig. 8)*. It is thus obvious that flow to the systemic circuit (aorta) depends upon a differential in resistance in each circuit with the pulmonary remaining equal to or higher than the systemic. If such is not the case, which is usual, flow is nearly entirely to the pulmonary bed with marked aortic under perfusion.[11] The clinical appearance of the baby, then, is predictably one of peripheral under perfusion, shock and systemic vascular collapse resulting in an ashen gray infant with extreme tachypnea and feeble or absent pulses. Unlike the other categories discussed, this infant is almost always *obviously* desperately ill. Acidemia is present. The electrocardiogram is diagnostic, showing no evidence of left ventricular complexes in the left precordial leads and the chest radiogram is often so *(Fig. 5, 6)*. The cardiac catheterization is confirmatory. No corrective procedure is currently present and palliation is successful only infrequently. Nonetheless, these infants inspite of their poor outlook, deserve all efforts aimed toward circulatory improvement, medical and surgical. Unlike the other cyanotic defects, HLHS infants are always in congestive heart failure and may benefit from the use of oxygen and a digitalis preparation. Surgery presently is aimed at maintaining the pulmonary to aortic shunt by performing band induced stenosis to the right and left pulmonary arteries, elevating main pulmonary artery pressure.[21]

The defects listed below, although much less common than TGV, T/F and HLHS which account



a) TGA. Note striking similarity of four different cases. In each the base of the heart (arrows) is narrowed and the cardiac silhouette appears "egg-shaped." The pulmonary vascularity is prominent.

Fig. 6: Composite of frontal chest radiograms of common cyanotic congenital cardiac malformations.

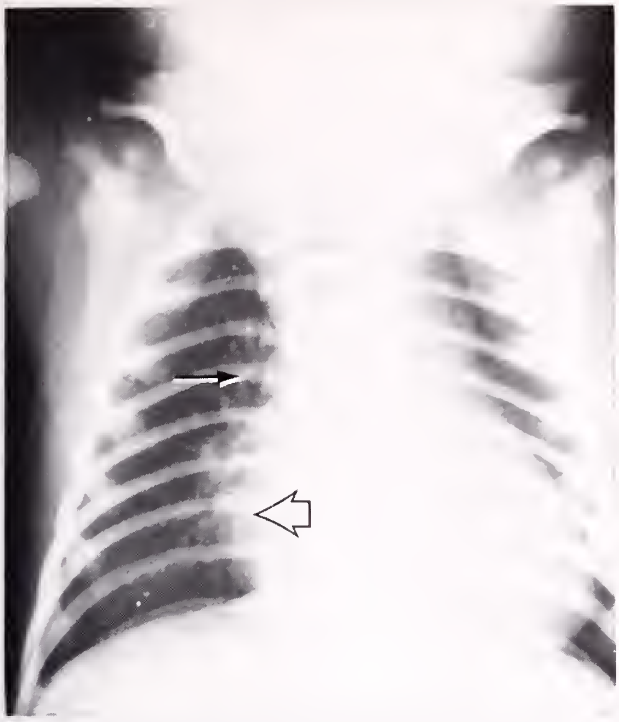


b) T/F. Normal sized heart. Area normally occupied by pulmonary artery is concave indicating reduction in size of that vessel (arrow). Note "boot" like appearance due to the upturned cardiac apex and concave pulmonary area.

for greater than 25% of all defects,[20] are nonetheless important clinically and demand consideration.

4. *Tricuspid Atresia (TA)* often presents with extreme reduction in pulmonary perfusion and deep cyanosis, presenting to nursery personnel problems in dealing with hypoxemia and acidemia identical to those of TGA. Because of the absence of any tricuspid valve orifice, no blood can flow to the right ventricle and the shunt is pretricuspid in location being through a patent foramen ovale or gross interatrial septal defect.

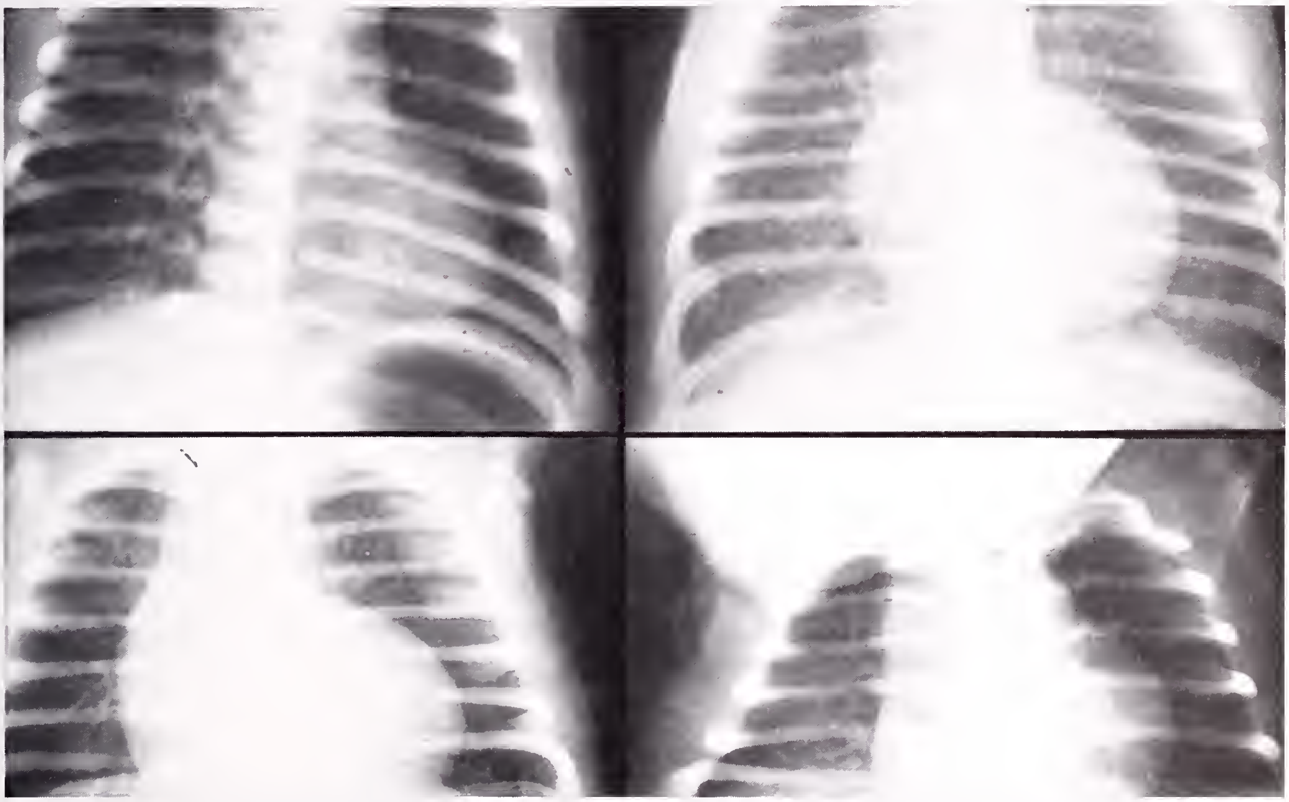
The right ventricle is underdeveloped, and this is reflected in the electrocardiogram as left axis deviation, left ventricular hypertrophy and most striking, marked diminution of the complexes from the right ventricle. Thus, this defect may be suspected and diagnosed from the electrocardio-



c) HLHS. Enlarged heart with increased pulmonary vascularity. The significant diagnostic finding is concavity of the right superior mediastinal area due to absence of the ascending aorta (solid arrow) combined with right atrial enlargement (open arrow) suggesting the numeral 5 in reverse.

gram *(Fig. 5)* and the chest radiogram as well. *(Fig. 6)* The latter usually shows a small, somewhat globular heart with reduction of pulmonary vascularity usually of significant degree. However, final diagnostic evaluation in preparation for palliative surgery is necessary. Clinically, two murmurs may be heard: a short ejection murmur due to the almost invariable presence of severe pulmonic stenosis that accompanies the major defect and a soft continuous murmur from persistent ductal patency. The defect must be treated with the urgency attending all the cyanotic defects.

5. *Pulmonary Atresia (PA) and Pulmonic Stenosis (PS)* will be considered together. Severity of PS of degree to cause symptoms in the neonate is physiologically and often surgically undifferentiable from PA. Here, too, the shunt is pretricuspid and the right ventricle tends to be underdeveloped but usually less so than with TA. Neither the chest radiograms nor the electrocardiograms can be relied upon to differentiate these abnormalities from those described, including TA. The murmurs, if present, may be similar to those of TA with soft ductal murmur frequently present. The metabolic consequences remain the same as is the need for immediate action. Surgery may be either corrective if the right ventricle appears adequate or palliative if it is not. The selection of the type of surgery thus is dependent upon the findings at cardiac catheterization and angiography *(Fig. 9)*.



d) TA. Representative radiogram of four cases. Note similarity of globular appearance of each with rounded apex, concavity of pulmonary area (solid arrow) and prominence of right atrium (open arrow). Pulmonary vasculature is reduced.

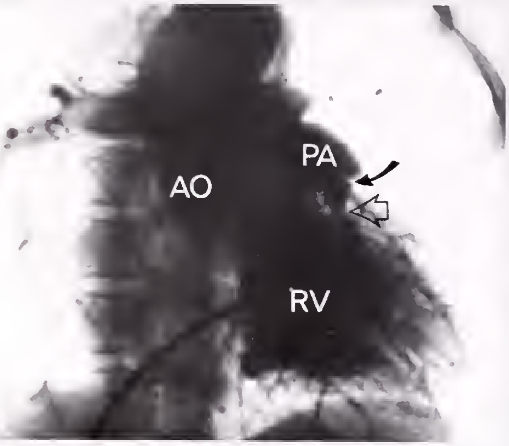


Fig. 7: Angiogram of T/F. Injection is into right ventricle (RV). The pulmonary artery (PA) has opacified normally from the RV and is considerably smaller than the aorta (Ao) which has opacified by way of the septal defect (not seen). The right ventricular anatomy of infundibular stenosis is well seen (narrowing indicated by open arrow) and valvular stenosis is also present (solid arrow).

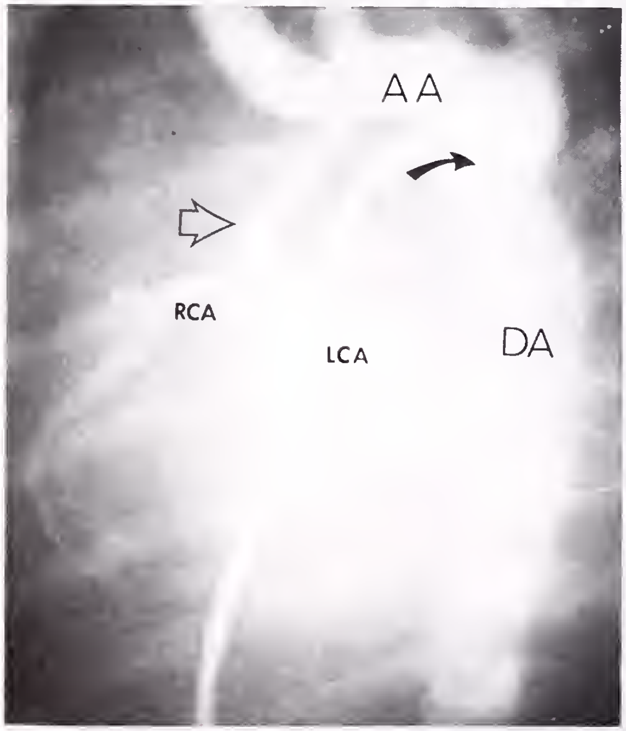


Fig. 8: Aortagram of HLHS. Left anterior oblique projection. The catheter has crossed from pulmonary artery, through ductus arteriosus (solid arrow) and has entered the descending aorta (DA) where injection was made. The diminutive ascending aorta (open arrow) is seen to terminate in the coronary arteries (RCA-LCA) inferiorly and to join the normal sized aortic arch (AA).

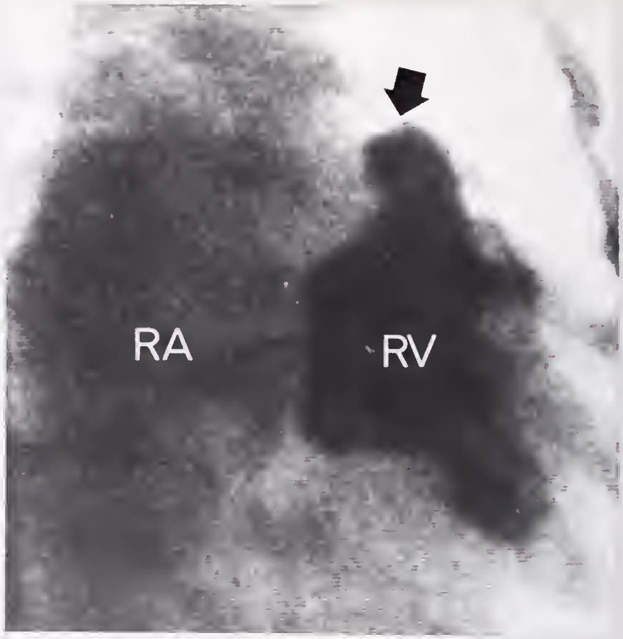


Fig. 9: Angiogram of PA. The catheter has coursed from the right atrium (RA) to enter the right ventricle (RV) where injection takes place. The angiogram lucidly demonstrates the atretic pulmonary valve (arrow), through which no contrast material passes, as well as a small RV.

It is not within the realm of this communication to outline in detail other acyanotic and cyanotic defects which may be found to produce a pathological state in the neonate. Because of their uncommon occurrence, compared to those included, they are most usually observed at regional centers for cardiac care. They may be, nonetheless, extremely important in selected infants.

Conclusion

The neonate with symptomatic heart disease presents a challenge to the pediatrician, neonatologist, and pediatric cardiologist. Although he may be desperately ill, with proper care, he and the vast majority of his fellows should survive the first year of life. Many others corrected by modern surgical techniques prove to be long-term survivors. It is to be emphasized that the presence of a congenital malformation of the heart should not cause consideration by attending personnel of cerebral insufficiency. The occurrence of even extreme hypoxemia in no way precludes normal mental development. Thus, these infants should be given every opportunity for survival.

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Monthly Surveillance Report

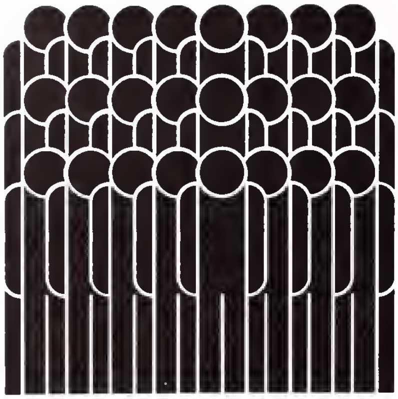
Cases of Certain Diseases
Reported to the Michigan Department of Public Health
For the Four Week Period Ending August 29, 1975

	1975 This 4-Week Period	1974 Same 4-Week Period	1975 Total To Above Date	1974 Total Same Date	Total Cases for 1974
Rubella	19	29	1,399	1,176	1,388
Cong. Rubella Syndrome	0	0	1	0	1
Measles	27	18	3,008	1,904	2,365
Whooping Cough	4	10	49	61	104
Diphtheria	0	0	1	0	0
Mumps	74	73	7,992	5,381	7,230
Scarlet Fever & Strep Sore Throat	818	621	16,076	25,685	31,802
Tetanus	0	2	0	3	6
Poliomyelitis (Paralytic)	0	0	0	1	2
Hepatitis	236	235	1,922	2,487	3,599
Salmonellosis (other than S. typhi)	65	74	543	699	1,001
Typhoid Fever (S. typhi)	1	0	5	6	11
Shigellosis	56	220	495	894	1,436
Aseptic Meningitis	29	24	94	87	162
Encephalitis	2	9	47	43	69
Meningococcic Meningitis	1	1	59	35	54
H. Influenza Meningitis	13	3	91	83	121
Tuberculosis	93	114	800	713	1,431
Syphilis	137	155	1,129	1,896	2,659
Gonorrhea	2,754	2,665	20,717	20,934	32,152

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

Information can be supplied by the local health department on the local incidence of disease.

Maurice Reizen, M.D., Director
Michigan Department of Public Health



Physicians to Speak at MSMS Scientific Meeting in Many Fields

Have you seen the list of speakers scheduled for the 1975 MSMS Scientific Meeting Nov. 11-13 at Michigan Inn, Southfield? Following are some that are prominent medical leaders; educators, and government officials:

Out-of-State Speakers

Jay G. Endsley, Lansing, director, Michigan Office of Health and Medical Affairs;

Harold F. Dvorak, MD, professor of pathology, Harvard University Medical School and staff, Massachusetts General Hospital;

Edward S. Judd, MD, Rochester, Minn., senior staff surgeon, Mayo Clinic;

J. Wesley Alexander, MD, Cincinnati, director, Transplantation Division, and acting director, Blood Center, University of Cincinnati;

John G. Bartlett, MD, Boston, associate professor of medicine, Tufts University;

Bert Brennan, executive director, Michigan Medical Practice Board;

Walter B. Shelley, MD, Philadelphia, chairman of dermatology, University of Pennsylvania;

Barbara Bland, RN, president, Nurses Association, American College of Obstetricians-Gynecologists;

Joan Goldstein, Princeton, former national coordinator, Women's Health Task Force of the National Organization for Women;

C. Patrick Babcock, Lansing, Governor's executive assistant for legislative affairs;

Melvin M. Grumbach, MD, San Francisco, chairman, Department of Pediatrics, University of California.

Michigan Speakers

Prominent Michigan physicians on the program include Nabil F. Maklad, MD, Eloise, chief, Diagnostic Ultrasound Division, Department of Radiology, Wayne County Hospital; F. Robert Fekety, Jr., MD, Ann Arbor, head, section of Infectious Diseases, U-M Medical Center; Richard T. Mellis, MD, Kalamazoo, chairman, Subcommittee on Better Utilization of OB Beds; J. Robert Willson, MD, Ann Arbor, professor of ob-gyn, U-M Medical Center; Joan C. Stryker, MD, Detroit, WSU assistant professor and chief, Outpatient Department, Hutzel Hospital; E. Ethelene Crockett, MD, Detroit obstetrician-gynecologist; Enrique Ostrea, MD, Detroit, director of University Nurseries, Hutzel Hospital; Robert H. Gregg, MD, Detroit, president of the staff, Children's Hospital of Michigan; Alan D. Perlmutter, MD, Detroit, WSU professor and chief, Department of Pediatric Urology, Children's Hospital of Michigan; John R. Caldwell, MD, U-M clinical professor and Richard D. Hohl, MD, Detroit, both of the Division of Metabolic Diseases, Henry Ford Hospital; Nathan W. Levin, MD, Detroit, chief, Division of Nephrology, Henry Ford Hospital; Viggo Jensen, MD, Harper Woods, WSU associate clinical professor; Thomas A. Petty, MD, Grosse Pointe, WSU clinical professor; Herbert A. Raskin, MD, Southfield, WSU Clinical professor; Douglas A. Sargent, MD, Grosse Pointe, director of psychiatric education, Cottage Hospital; Sidney Bolter, MD, Southfield, psychiatry department chairman, Providence Hospital; Barbara Threatt, MD, Ann Arbor, medical director, Michigan Breast Cancer Detection Demonstration Project and U-M assistant professor; Jerry C. Rosenberg, MD, WSU professor; John N. Wolfe, MD, Detroit, Hutzel Hospital chief of radiology; Luis A. Tomatis, MD, Grand Rapids, chief of thoracic and cardiovascular surgery at Butterworth Hospital; Conrad R. Lam, MD, Detroit, consultant emeritus at Henry Ford Hospital; and Rodman E. Taber, MD, Detroit, WSU adjunct associate professor.

Concepts In Thermal Burn Therapy

By Alan Wasserstrum, M.D.
Oak Park

Approximately two million Americans are burned annually. Fifty-percent of the burns require medical attention or cause limitation of activity. Twenty-five percent require bed rest. About 70,000 patients require hospitalization, the annual mortality being 12,000; an incidence of four per 100,000 population. The higher percentage of deaths occurs in those less than 14 years old and in those greater than 50 years old. Seventy-five percent of all injuries resulting in death occur in the home and the majority of these are easily preventable. People in Western and Southern United States have a 20-30% higher risk than those in other areas of the United States. Non-whites have a death rate three times greater than whites. These statistics probably reflect central versus open heating.

Many methods of treatment have been used since the first reference to burns was made in the Ebers Papyrus of the 16th Century B.C.E. They include tannic acid, picric acid, alcohol, sodium bicarbonate, Adrenalin, acetic acid, Dakin's solution, 2 N Saline, Saline, concentrated magnesium sulfate, chlorine antiseptic, mercurochrome, neutral acriflavine, boric acid, aluminum acetate, potassium permanganate, mercuric chloride, carbolic acid, turpentine, iodine, chloretone,powdered chalk, boric acid, bismuth formic iodide, bismuth subnitrate, bismuth subgallate, thymol iodide, iodoform, butesin picrate, lead carbonate, horse serum, scarlet red, copper sulfate, and ox omentum. Most of these methods were not only ineffectual but were deleterious to the burn wound. The recognition of the importance of the loss of fluid and the need for replacement was noted in the late 19th Century but was not generally accepted until the 1930's.

Skin is the largest organ of the body. It has philosophical and psychological import as the dividing line between self and non-self. It functions in the protection of the self from outside agents, in regulating temperature, in preserving body fluids, in providing sensory imput, and in providing a socially acceptable covering. It also allows for mobility of underlying structures. Skin is composed of the epidermis which contains a nonviable stratum corneum of varying thickness and the stratum malphigi which is viable. The epidermis interdigitates with the dermis by means of rete pegs. Within the skin, in varying amounts, are glands, hairs, and neurovascular components.

Doctor Wasserstrum is a resident in Plastic Surgery at Providence Hospital, Southfield; and is affiliated with Mt. Carmel Mercy and Sinai Hospitals of Detroit.

The effect of the burn on the total organism will depend on the area burned, the depth of burn, the extent of burns, the premorbid condition of the patient, and the treatment received. Burn depth is defined in terms of first, (epidermal involvement), second degree (dermis to a variable extent), and third degree (all dermis and appendages involved). Epidermal burns are characterized by hyperemia and may have edema. They carry no mortality and heal with little problem. Second degree or intradermal burns will heal within three weeks if superficial but will take up to six weeks if deep. Capillary refill is present and vessicles may be present. Subdermal or third degree burns yield a cold, hard, leathery, insensitive skin with absent capillary filling. No skin elements are left within the wound. Various dyes have been used to determine burn depth early but these have had little practical import.

The plot of fatality rate versus extent of injury yields a sigmoidal curve. There is a tendency to over-estimate especially if the Rule of Nine's is used in truncal burns (26% not 36%), and in children less than 15 years old. The Rule of Fives or charts can also be used. Some have used the Burn Index to measure extent. This is composed of third degree plus one-half of the second degree burn.

It is important to take an adequate history as to the patient's health before injury, the means by which the burn was sustained, and the duration of exposure. Flame burns usually tend to be deep. Burns in closed areas may cause respiratory complication due to inhalation of toxic gaseous products causing chemical irritation. Patients with deep facial burns, singed nasal vibrissae, mouth blisters, an inflamed sooty tongue, dyspnea, raals, and chest eschars may develop respiratory failure. Blood gases and carboxyhemoglobin levels should be obtained. Carboxyhemoglobin levels greater than 60% need high inspired oxygen therapy and exchange transfusions. Pulmonary function tests and daily tracheal cultures are important. Initially, the patient may be asymptomatic, only later to develop hypoxia and hyperventilation leading to hypocapnea and respiratory alkalosis. Pulmonary insufficiency usually manifests itself within 48 hours and may be due to upper airway obstruction, inability of the respiratory muscles to move the chest wall, bronchospasm, atelectasis, pneumonia, or pulmonary edema due to decreased hydrostatic pressure or heart failure. The treatment will depend upon the cause and may require oxygen therapy with high humidity, bronchodilators, steroids, pulmonary toilet, bronchoscopy, or mechanical ventilation. Tracheostomy carries a high incidence of infectious complications and should be performed only if there is supraglottic obstruction, severe facial fractures, cerebral trauma, thoraco-skeletal injury, inability to maintain pulmonary toilet, and where long term mechanical ventilation is needed.

In a burn of greater than 15% in adults (8-10% in those less than four or greater than 60 years of age) intravenous fluids are usually needed. Various formulae using varying amounts of colloid, blood, and electrolyte solutions have been proposed and used with good results. Colloid has not been shown to increase survival and has no effect on increase in plasma volume until 36 to 48 hours when a spontaneous increase of blood volume begins to occur no matter whether colloid or crystalloid has been given. For the first 24-48 hours the capillaries leak albumin. The need for more sodium than water and more bicarbonate than chloride points to the use of hypertonic salt solution with bicarbonate or lactate. Baxter uses Lactated Ringers at a rate of 4 cc./kg/1% of body burn without any free water colloid or blood during the first day. Since most of the fluid loss is over by the first 12-18 hours, one-half of the fluid is given the first eight hours and one-quarter the succeeding eight hour periods. No matter what method is used, the patient is monitored for the adequacy of administration. A urine output of 50-100 cc per hour, a clear sensorium, a pulse rate less than 120, a normal to high blood pressure, a central venous pressure less than 5, no nausea or ileus, a bicarbonate greater than 18, a cardiac output greater than 3.1 Liter/m^2, and a urinary sodium excretion greater than 30 meq/L signify a good result.

Inadequate renal output may be due to the shunting of blood from the cortex to the medulla or due to obstruction by tubular casts leading to increasing pressure and decreased perfusion. If the patient's urinary output does not respond to fluid, Manitol can be given and can be repeated up to 100 gms per day if a urine output of greater than 40 cc per hour is not achieved. Hemoglobinuria is a reliable index of extensive subdermal burn. Myoglobin may be present in muscular damage.

At 24 to 36 hours, a 70 kilogram male may require 300 cc to one liter of plasma. The patient is usually hypoalbuminemic, the serum albumin reaching a nadir at three to five days and remaining subnormal for 60 days. There is a hyperglobulinemia and a hypo gamma globulinemia which is marked during the first week and correlates with severity and fatality. The Hematocrit is not an accurate index of blood volume after 48 hours. At 24 hours there is an increased evaporative water loss. The patient may be given water intravenously or by mouth if there is no ileus. The serum sodium should be maintained at 138-142 meq/L. Normal evaporative loss may be increased four to 15 fold. A 40-70% burn may lose three to five liters per day (children greater than 100 cc/1b/day). At 36 hours, there is a large excretion of potassium, which may require 80-160 meq/L per day of replacement. From 48 hours to 10 days, there is mobilization of wound edema with diuresis. A microangiopathic anaemia may require administration of packed cells in order to maintain a Hct. of 35-40. Cardiac output will be increased due to anaemia and increased metabolic demand for oxygen. The patient will also require vitamins in the amount of three times normal.

Fluid resuscitation may be limited by disseminated intravascular coagulation which occurs in large burns and is heralded by increased anaemia, increased fibrin split products and decreased platelets. In burns greater than 60%, a persistently low cardiac output due to a circulatory myocardial depressant can cause death. Digitalization in the face of abnormal sodium potassium ratios has a marked increased incidence of arrhythmias.

During the first 24 hours, care consists of:

1). Careful history and physical examination.
2). Initial weighing and height measurements.
3). Estimation of depth and body surface involved.
4). Fluid administration with appropriate monitoring of response.
5). Laboratory exam to allow for correction of electrolyte shifts.
6). Analgesics as needed.
7). Accurate records.
8). Elevation of burned limbs.
9). Wound care.

After adequate resuscitation has been accomplished, care of the wound becomes the foremost consideration. In a series of 88 autopsies performed on burned patients, it was found that burn wound sepsis was the contributing factor leading to death in 74% of patients. The majority were of the pseudomonas type.

During the first six to 18 hours post burn, the skin contains its normal flora or is sterile. With time, this shifts to gram negative (E. coli, Enterobactera, Klebsiella, Aerobacter, and Pseudomonas. The source is usually from the patient's gastrointestinal tract. It has been shown that if colony counts of less than 10^5 per gram of tissue, can be obtained, sepsis can usually be averted. This protection must be afforded until the wound is debrided and coverage has been performed. Coverage also prevents evaporative water loss and its concomitant loss of calories which is 586 kilo-calories/liter.

Besides bacterial infection, viral infections can take place. These usually occur in patients on antibacterial therapy and are usually of the Herpes type. It can evolve into a disseminated process or secondary infection can occur. With the advent of better microbial therapy, the fungus has come into prominence. Candida is the most common and usually remains localized. Aspergilles, Mucor, and Rhisopus are more invasive in nature and carry a higher mortality.

Septicemia is best managed by adequate fluid replacement and antibiotic therapy. The role of steroids and vaso-pressors or vaso-dilators is more debatable. The presentation of the septicemia may give a clue as to its cause:

	STAPH	PSEUDO	CANDIDA
Wound	loss of granulation	ecthyma granulosun	normal to pale granulation
Course	insidious 2-6 d	rapid 12-36 hrs	Chronic
Disorient.	severe	mild	mild
Temp	↑ 105	↓ 100-103 or normal	Nor. ↑
WBC	↑ 20,000	↓	↑
Platelets	N	↓	↓
Hypotension	Delayed	Sudden	Delayed
Mortality	Low	Moderate	High

Various methods of bacterial control are in use today after initial cleansing and debridement have been performed. Silver Nitrate (.5%) has the following advantages:

1). All known wound pathogens are sensitive except fungi although the best results are obtained if used before established infection.
2). Does not effect epithelial growth unlike Sulfamylon.
3). Non-allergenic.
4). Very slightly absorbed.
5). Wet dressings decreased insensible water loss.
6). Can be used over new skin grafts.

The disadvantages are:

1). The limited penetration requiring the removal of thick eschar.
2). The electrolyte loss of 350 meq/d/m^2 of Sodium due to hypotonicity.
3). The dressings restrict motion.
4). The donor sites become covered with a silver salt eschar.
5). The housekeeping is difficult.

The silver nitrate is applied to a one inch layer of loosely woven dressing which is covered with dry sheets or a blanket. The dressings are wet every two hours to keep a concentration at .5% and changed daily with daily debridement. Urine sodium is kept greater than 40 meq/liter.

Sulfamylon, 10%, is alpha-amino para toluene sulfonamide as an acetate salt. It is a white odorless, water soluble cream, originally used by the Germans in WWII and resurrected in the early 1960's at the Brooke Army Hospital. It is effective against most gram positive and negative organisms and especially effective against Pseudomonas. It is readily absorbed through the burn eschar and easily applied. It is applied ⅛" thick every 12 hours or as needed. The Hubbard tank can be used for daily cleansing. It is discontinued as soon as epithelial buds have coalesced. It has effected a dramatic reduction in mortality in burns of 30-60%. Sulfamylon produces hypersensitivity in seven percent of patients, all but 1% of which can be controlled by use of an antihistamine. It produces discomfort in partial thickness burns. The drug is a potent carbonic anhydrase inhibitor which causes a propensity for metabolic acidosis. This results in a compensatory hyperventilation which may over-correct resulting in a high pH, low PCO_2, and normal PO_2. This sometimes requires therapy cessation. Eschars remain adherent for a longer time due to a decreased amount of bacteria. Several reports in animals point to Sulfamylon hindering epithelialization.

Silver Sulfadiazine, 1%, in a water soluble base is painless and soothing when applied. It is bactericidal and long lasting. Some allergic reactions have occurred. The cream is worked into crevices and two layers of fine mesh over which fluffs are placed in order to press the cream into the eschar. If no dressings are used, it is applied every twelve hours. Tubing can be used to cleanse and obtain joint movement. Sulfadiazine can be applied to fine mesh over grafts. It does not interfere with epithelial regeneration.

Topical Neosporin and Gentamycin have been used in a water miscible base. Over a two year period, resistance of pseudomonas increased from 8 to 94%. Gentamycin is both ototoxic and nephrotoxic. It is not appreciably absorbed.

Vaccine and Hyperimmune plasmas have been developed for use against pseudomonas and have been used prophylactically in burns greater than 40% total or greater than 20% third degree. Adults are given 250 ml/d and are vaccinated on admission and weekly with the seven more common strains of pseudomonas. This treatment is continued until the burn wound is less than 20%. A decrease of pseudomonas septicemia from 32% to 8% has resulted. Patient isolation systems have also been used, however, most pseudomonas appear to be derived from the patient's own gastrointestinal tract. Better methods of sepsis control have altered mortality. In 1965, a 45% burn had a 50% survival rate. In 1970, a 70% burn had a 50% survival rate. In 1966, the mean post burn death day was the 20th day, in 1970, it was the 49th day.

Formal radical excision is reserved for small burns. Enzymatic debridement and tangential excision by use of a knife or dermatome until bleeding begins have been used. Most burns are treated with local multiple debridements. The removal of the eschar and its resurfacing are limited in larger burns by the availability of the donor sites. Due to the unavailability of the patients own donor sites, other temporizing methods have been developed. Cadaver grafts have been used when available. They are taken within 16 hours from donors who did not die from a communicable disease or malignancy. They can be stored in a Petri dish with one million units of Penicillin and 500 mg of Streptomycin for up to one month. They are changed at least every five days. The grafts decrease evaporative heat and water loss, decrease tissue desication, decrease exudative protein, facilitate joint movement, assist debridement, limit bacterial proliferation and promote granulation. The grafts can be used to debride untidy wounds, give temporary coverage, or test recipient areas. Attempts to increase storage by rapid freezing with glycerol to -190°c and lyophilization have proved to be expensive and this technique continues to be limited by supply and limited storage time.

Biologic dressings of pigskin have been used. These are usually obtained from commercial sources and left in place for 4-5 days or allowed to separate spontaneously at seven to 10 days. There is no immunologic rejection of pigskin and the secondary set phenomenon does not occur. Synthetic dressing materials of nylon velous, polyurethane, polyethylene and Silastic have been used as temporary dressings.

Autologous grafting is usually done 14-28 days post burn. High priority is given to hands, face, and flexor surfaces of joints. Grafts can be acquired under Ketamine anesthesia. Mesh grafts can be expanded from 1.5:1 to 12.1. They have the advantages of allowing for drainage and requiring less donor area. Their cosmesis is poorer.

The Curling ulcer which was first described by Swan in 1823 is seen in five to 14% of hospitalized burn patients. The autopsy incidence of gastrointestinal ulcer is 65%. Most cases occur in burns of 30 to 65% but have been reported in burns of 10%. Of 225 cases at Brooke, only 44 have survived. The ulcer will usually manifest near the end of the first week but has been reported on the first day and during the ninth week. It is usually heralded by hemorrhage. The ulcers may be multiple. Fifty-percent are located in the stomach, usually the fundus, 30% are duodenal, and the rest are located in both places. Antacids have been of no benefit. Vagotomy and hemigastrectomy are the procedures of choice if non-surgical therapy does not control hemorrhage or the patient rebleeds. Of those patients who have a second bleed, 50% will bleed a third time.

Psychological adjustment of the patient is an important aspect of care. Many severe burns undergo an acute psychotic reaction early in the course of treatment. Self-pity and anger must be dealt with. The response of the nurses and doctors is crucial for a good ultimate adjustment.

Proper positioning, splintage, and physical therapy minimize contracture. Contracture must be anticipated and corrected early to minimize skeletal deformity. Prevention of neck contracture requires prolonged pressure and splintage of the neck after grafting has been accomplished as outlined by Cronin. A 100% take must be accomplished if contracture is not to recur. Vertical margins are broken up by z-plasty. The splint not only keeps the neck extended but molds the chin-neck angle and applies even pressure which appears to decrease scar hypertrophy. Dorsal hand burns can be surfaced with split grafts unless tendon coverage is needed. Metacarpophalangeal joints can be extended by collateral ligament section as the interossei will give the needed stability. It is important that the thumb web space be maintained in order to give maximum function.

Facial scarring is corrected as quickly as possible in esthetic units. The nose and chin can be constructed by a distally based upper arm flap or a delayed thoracoabdominal flap. The check may require a neck rotation flap or a distal flap. Eyebrows may be corrected by advancement with scar excision, z-plasty repositioning, cosmetic camouflage, tatooing, punch grafts, strip grafts, island pedicle flaps or scalping flaps. The hair must be placed so it has a correct angle of growth.

Initial care of eyelid burns causing ectropion, require irrigation every 3-4 hours with saline if the periorbita are involved and placement of an opthalmic ointment. The upper lid is reconstructed first. Skin can be borrowed from the opposite lid, supraclavicular or medial upper arm. It should be about .014″ thick. An incision is made 4 mm above the lash line in order to correct position and remove the restrictive scar. About 20% over-correction is allowed and a bolus dressing applied for 3-5 days. Lower lid grafts can be applied similarly. It is important to extend the incision beyond the lateral canthus and medially to the nose. Epicanthal flods can be corrected with opposing z-plasties or may require a graft. Tarsoconjunctival flaps are used to replace trassal loss.

Post burn ears can benefit from surgical reconstruction for lesser deformities and for those who cannot accept a prosthesis for extensive losses. Severe deformities frequently can be prevented by preventing chondritis. Pressure must be avoided and small areas of excised cartilage are debrided

(Continued on page 640)

Patterns of Care – Radiation Therapy in Michigan

By Joel Elliot White, M.D.
Detroit

Introduction

A survey to determine the type and location of radiation therapy facilities in Michigan was undertaken this year under the auspices of the Michigan Society of Therapeutic Radiologists.

The list of institutions for survey was obtained from *The American Hospital Association Guide, The Health Care Field, 1974* Every hospital listed in the guide as having any type of radiation therapy facility was queried. The questionnaire included a request for the location of any offices that might be participating in radiation therapy or any facility which was known to have radiation therapy, but which did not receive a questionnaire. No attempt was made to survey specialized facilities such as would exist in a dermatologist's office.

Results

A total of 115 institutions have been surveyed. This includes 109 hospitals and six offices. All have responded.

Of these institutions, approximately one-third indicate that they no longer are performing therapy. Seventy-five institutions, roughly two-thirds of those responding, indicate that therapy is being performed.

Institutions were classified on the basis of the type of equipment and radiation therapy services available. Nearly one-half of those offering therapy have no megavoltage equipment.

Megavoltage equipment (cobalt-60, linear accelerators, and/or betatrons) is used by the remainder of those institutions performing therapy. Twenty percent (8/41) indicate that they have more than one unit, and two institutions report three or more units. All hospitals with megavoltage equipment also report kilovoltage, intracavitary and radionuclide therapy. Five of the six office practices report using megavoltage radiation.

Specialized treatment planning equipment and procedures are available only at institutions with megavoltage therapy. Treatment simulators and transverse tomography units were found only together. All five of these facilities also use computerized dosimetry and individualized field-shaping techniques. (Example: cerrobend blocks and hot wire cutter, which are essential in the curative therapy of Hodgkin's disease). Ten additional institutions utilize computerized dosimetry. These institutions also report the use of individualized field-shaping. Five institutions report the use of individual field-shaping only. In total, less than one-half of institutions with megavoltage facilities have specialized equipment. Overall, 6.7% of institutions reporting therapy have all of the specialized techniques.

County maps are available detailing the distribution of megavoltage and non-megavoltage equipment, as well as specialized equipment.

Discussion and Comments

A major objective of radiation therapists is to extend the availability of adequate treatment to all cancer patients. In the early 1950's, cobalt-60 became available for common use. This was the first relatively inexpensive source of megavoltage (high-energy) radiation. Megavoltage therapy was a significant milestone in radiation therapy because it provided a mechanism for the delivery of a high dose to a depth in the body without causing severe damage to the more superficial tissues. Thus when megavoltage radiation became economically feasible, there was a rapid proliferation of units in hospitals and offices around the country.

Increasing knowledge of the routes and patterns of tumor spread, coupled with advances in the techniques used to define tumor extent, has led to the treatment of larger volumes of tissue. The tolerance of normal tissues to irradiation markedly decreases as the volume treated increases.

Therefore, it is important to accurately assess the extent of tumor so as to treat only that volume which is necessary to include all the known disease. Increasingly more complex techniques such as computerized dosimetry and individualized field-shaping have evolved. The attendant requirements have escalated the need for more sophisticated equipment such as treatment simulators and linear accelerators. Additional personnel, such as physicists and specialized technicians, are necessary for optimum operation and

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Doctor White is treasurer, Michigan Society of Therapeutic Radiologists, and chairman, Radiation Therapy Resource Committee.

RADIATION THERAPY/*Continued*

use of this equipment. The cost of installation, maintenance, and use of this equipment has escalated in proportion to the increasing complexity.

Summary and Conclusion

This survey was aimed primarily at determining the location within the state of Michigan of various radiation therapy equipment. Megavoltage radiation has provided one of the most significant advances in cancer therapy, yet 45% of institutions performing cancer therapy are doing so without megavoltage equipment. In addition, many areas of the state have no facilities at all.

Other questions will need answers before we can truly offer a solution to the problem of optimal distribution of radiation therapy services. This author feels that multiple solutions are possible. One solution that the present data might suggest is a stratification of radiation therapy services with the very complex treatments given in a few centers. Futher study is needed.

BURN THERAPY/*Continued*

and soft tissues approximated on a skin graft placed.

The severe burn is one of the most traumatic events the body can undergo. The degree of recovery will depend on the vigorousness which complications are anticipated and treated.

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"Yours Is A Rather Unusual Case — It Seems The Heat From Your Inflamed Tonsils Has Touched Off The Gas In Your Stomach And Your Large Intestine Has Exploded."

***IMPORTANT INFORMATION:** This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or Narcan® (naloxone HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.*

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with special caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis. In severe dehydration or electrolyte imbalance, withhold Lomotil until corrective therapy has been initiated.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage. Use with care in patients with acute ulcerative colitis and discontinue use if abdominal distention or other symptoms develop.

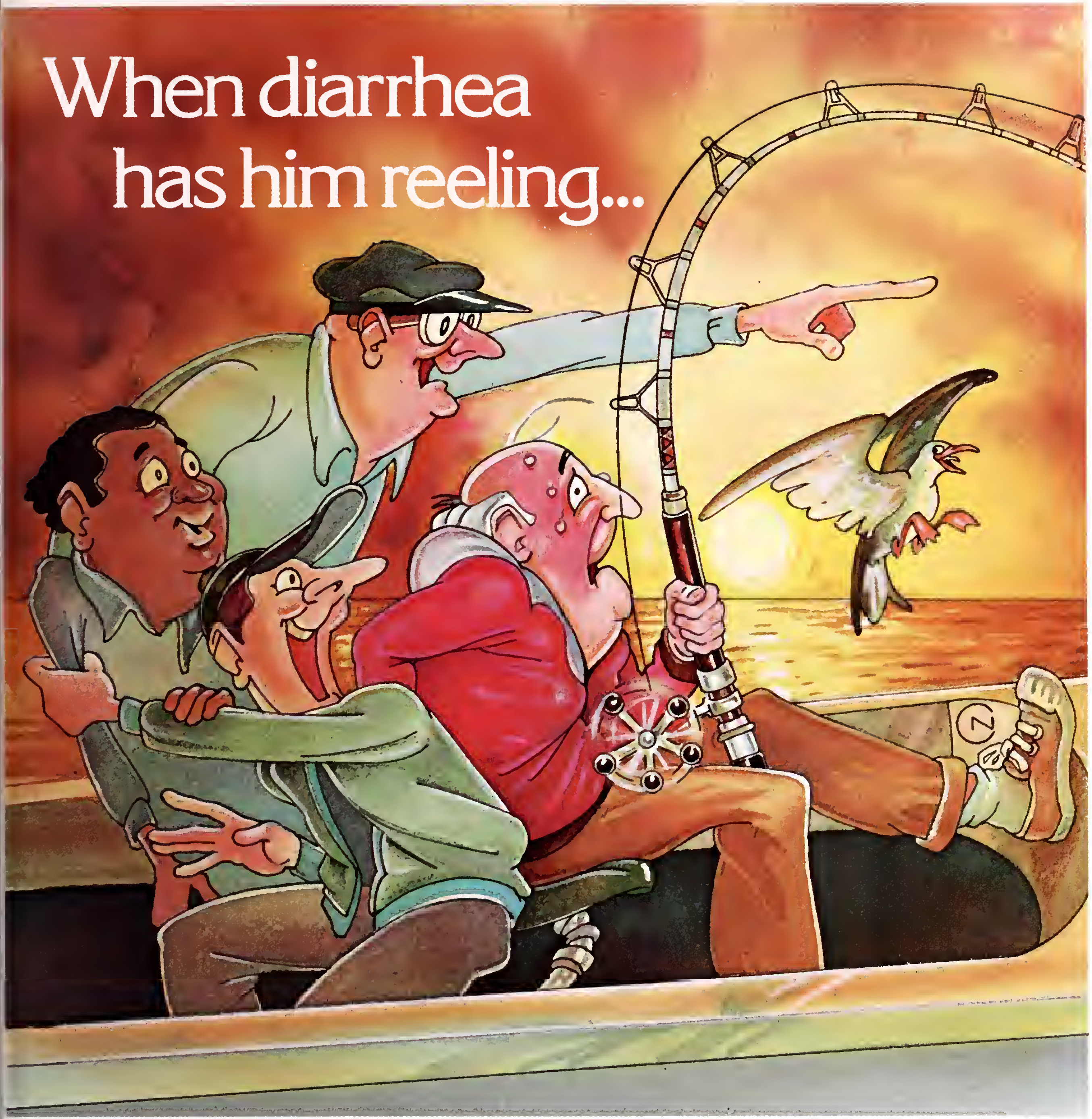
Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing, hyperthermia, tachycardia and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria, paralytic ileus, and toxic megacolon.

Dosage and administration: **Lomotil is contraindicated in children less than 2 years old.** Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, hyperthermia, tachycardia, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. A narcotic antagonist may be used in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. Liquid, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

SEARLE **Searle & Co.**
San Juan, Puerto Rico 00936


When diarrhea has him reeling...

Diarrhea can hook anyone. When it does, physicians and patients both want prompt control of diarrheal symptoms. Lomotil will usually control diarrhea promptly.

This rapid action can halt the emergency aspect of diarrhea and is comforting and reassuring to the patient. Electrolyte and fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate specific therapy should be given along with Lomotil.

Lomotil is contraindicated in children less than 2 years old.

Lomotil® TABLETS LIQUID

Each tablet and each 5 ml of liquid contain diphenoxylate hydrochloride 2.5 mg (Warning: May be habit forming), atropine sulfate 0.025 mg

holds the line.

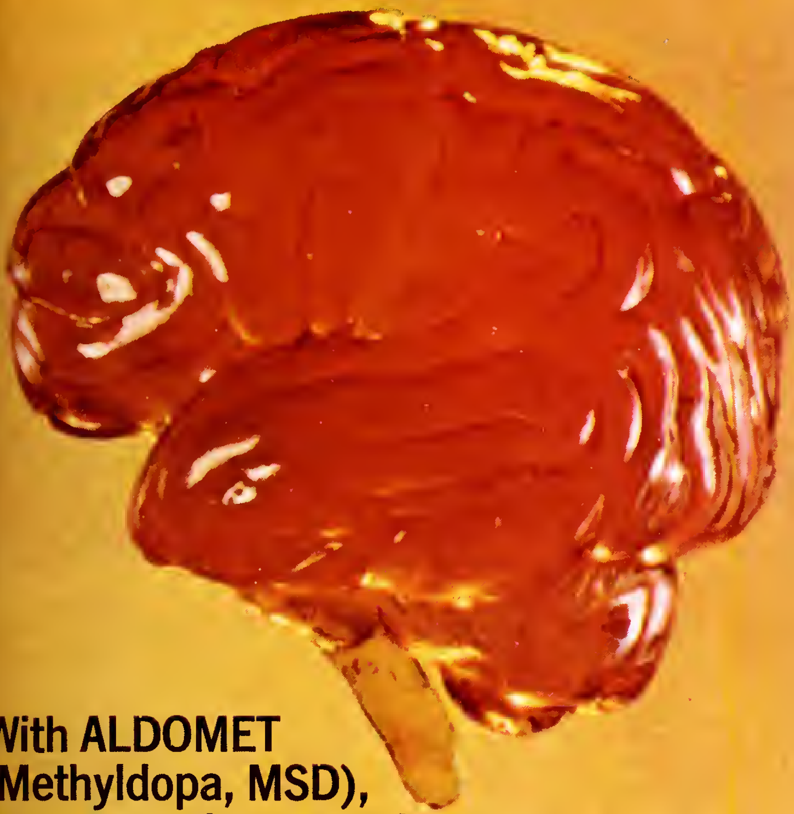
In hypertension, ALDOMET® (METHYLDOPA|MSD) usually offers more than effective lowering of blood pressure...

With ALDOMET (Methyldopa, MSD), existing renal function is usually unchanged

ALDOMET has no direct effect on renal function. When used in effective doses, ALDOMET usually does not reduce glomerular filtration rate, renal blood flow, or filtration fraction.

With ALDOMET (Methyldopa, MSD), cardiac output is generally unchanged

ALDOMET has no direct effect on cardiac function. When ALDOMET is used in effective doses cardiac output is usually maintained with no cardiac acceleration; in some patients the heart rate is slowed.



With ALDOMET (Methyldopa, MSD), symptomatic postural hypotension is infrequent

ALDOMET reduces both supine and standing blood pressure. Less frequent symptomatic postural hypotension is experienced with ALDOMET than with many other antihypertensive agents. Exercise hypotension and diurnal blood pressure variations rarely occur.

for hypertension

TABLETS, 250 mg, 500 mg, and 125 mg

ALDOMET®
(METHYLDOPA|MSD)

a unique antihypertensive agent

ALDOMET is contraindicated in active hepatic disease, hypersensitivity to the drug, and if previous methyldopa therapy has been associated with liver disorders. It is not recommended in pheochromocytoma.

It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

MSD
MERCK
SHARP&
DOHME

For a brief summary of prescribing information, please see following page.

MSD
MERCK
SHARP&
DOHME

addendum

to further simplify therapy for many patients

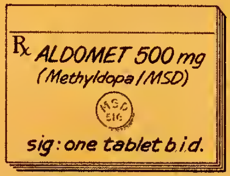
now available
ALDOMET® 500 mg
(METHYLDOPA|MSD)

- **often more practical to prescribe**
- **easier for patients to remember**

Now offered in addition to the standard 250-mg tablet, the new ALDOMET 500 mg tablet is a patient convenience. An especially important one, since in hypertension convenience of the dosage schedule is one factor that can make the difference in compliance of the patient. The minimum daily dose of ALDOMET is 250 mg b.i.d. The usual starting dose is 250 mg t.i.d. Dosage is adjusted as necessary by adding or deleting 250 mg or 500 mg at intervals of not less than two days. The maximum dose is 3.0 g per day.

Examples of b.i.d. or t.i.d. dosage convenience provided by ALDOMET 500 mg within the usual daily dosage range of 500 mg to 2.0 g:

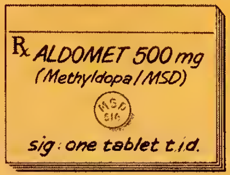
1.0-g daily dose =



℞ *ALDOMET 500 mg*
(Methyldopa/MSD)

sig: one tablet b.i.d.

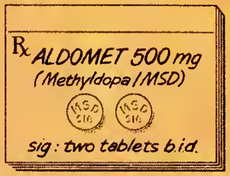
1.5-g daily dose =



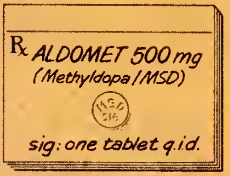
℞ *ALDOMET 500 mg*
(Methyldopa/MSD)

sig: one tablet t.i.d.

2.0-g daily dose =



℞ *ALDOMET 500 mg*
(Methyldopa/MSD)
MSD 516
MSD 516
sig: two tablets b.i.d.



℞ *ALDOMET 500 mg*
(Methyldopa/MSD)

sig: one tablet q.i.d.

NOTE: Tablets shown are not actual size.

in hypertension

ALDOMET® (METHYLDOPA|MSD)

usually lowers blood pressure effectively

Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis; if previous methyldopa therapy has been associated with liver disorders (see Warnings); hypersensitivity.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between 6 and 12 months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at 6 and 12 months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first 3 weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first 2 to 3 months of therapy. In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first 6 to 12 weeks of therapy or whenever an unexplained fever occurs. If fever and abnormalities in liver function tests or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, a reversible reduction of the white blood cell count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur. Patients should be followed carefully to detect side reaction or unusual manifestations of drug idiosyncrasy.

Use in Pregnancy: Use of any drug in women who are or may become pregnant requires that anticipated benefits be weighed against possible risks; possibility of fetal injury can not be excluded.

Precautions: Should be used with caution in patients with history of previous liver disease or dysfunction (see Warnings). May interfere with measurement of uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, falsely high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. It is important to recognize this phenomenon before a patient with a possible pheochromocytoma is subjected to surgery. Methyldopa is not recommended for patients with pheochromocytoma. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has recurred after dialysis in patients on methyldopa because the drug is removed by this procedure.

Adverse Reactions: *Central nervous system:* Sedation, headache, asthenia or weakness, usually early and transient; dizziness, lightheadedness, symptoms of cerebrovascular insufficiency, paresthesias, parkinsonism, Bell's palsy, involuntary choreoathetotic movements; psychic disturbances, including nightmares and reversible mild psychoses or depression.

Cardiovascular: Bradycardia, aggravation of angina pectoris. Orthostatic hypotension (decrease daily dosage). Edema (and weight gain) usually relieved by use of a diuretic. (Discontinue methyldopa if edema progresses or signs of heart failure appear.)

Gastrointestinal: Nausea, vomiting, distention, constipation, flatus, diarrhea, mild dryness of mouth, sore or "black" tongue, pancreatitis, sialadenitis.

Hepatic: Abnormal liver function tests, jaundice, liver disorders.

Hematologic: Positive Coombs test, hemolytic anemia. Leukopenia, granulocytopenia, thrombocytopenia.

Allergic: Drug-related fever, skin rash.

Other: Nasal stuffiness, rise in BUN, breast enlargement, gynecomastia, lactation, impotence, decreased libido, mild arthralgia, myalgia.

Note: Initial adult dosage should be limited to 500 mg daily when given with antihypertensives other than thiazides. Tolerance may occur, usually between second and third month of therapy; increased dosage or adding a thiazide frequently restores effective control. Patients with impaired renal function may respond to smaller doses. Syncope in older patients may be related to increased sensitivity and advanced arteriosclerotic vascular disease; this may be avoided by lower doses.

How Supplied: Tablets, containing 125 mg methyldopa each, in bottles of 100; Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD MERCK SHARP & DOHME

The Significance Of Cardiac Arrhythmias In The Septic Patient

By John R. Kirkpatrick, MD
Robert F. Wilson, MD
Detroit

Abstract

Forty-four septic patients were reviewed retrospectively to elicit the relationship of cardiac arrhythmias and sepsis. Twenty developed an arrhythmia (70 percent mortality). The most common organism was Proteus m. and the most common arrhythmia was a severe sinus tachycardia. Those patients (24) who did not develop an arrhythmia had a significantly lower mortality (25 percent).

During the last several years, we have been interested in the cardiac response to bacteremia. Our interest was further heightened by the finding that cardiac dysfunction, as manifested by the development of an arrhythmia, could be the presenting sign of a septic crisis (1). To substantiate this and document other changes in cardiac rhythm during sepsis, we have retrospectively reviewed the charts of 44 patients with documented bacteremia.

Methodology

The patients included in this study were chosen by obtaining a list of positive blood cultures at Detroit General Hospital for an 18-month period. The records of these patients were reviewed to make certain that each patient fulfilled certain criteria required for inclusion in the study. Every patient studied had a baseline electrocardiogram and serial electrocardiographs or cardiac monitoring while septic. Metabolic studies including electrolytes, blood gases, and occasionally cardiac function curves were required on each patient so that these causes might be eliminated as predisposing factors for the development of their arrhythmia. Finally, a complete record of all drugs administered was required so that this variable could be evaluated as an etiologic factor.

Forty-four patients met these criteria and were included in the retrospective study. Each patient's chart was carefully evaluated to ascertain the following parameters: (1) organism isolated from the blood, (2) site of infection, (3) diagnosis, (4) EKG changes, (5) etiology of EKG changes, (6) complications, (7) outcome.

Results

A variety of organisms **(Fig. 1)** were present in the blood of the patients in the study. Proteus mirabilis (30 percent) predominated; the most common site of origin for the septicemia was the peritoneal cavity. No significance should be drawn from this as many of these patients were on the surgical service and, thus, may reflect a bias of the sampling. Twenty-four (55 percent) of the patients had no arrhythmia at any time during their hospital stay; the remaining patients (20) developed a cardiac arrhythmia during their septicemia **(Fig. 2)**. Among those patients developing a cardiac arrhythmia while septic, 14 (70 percent) died. In contrast to this, among patients without arrhythmias only six (25 percent) died.

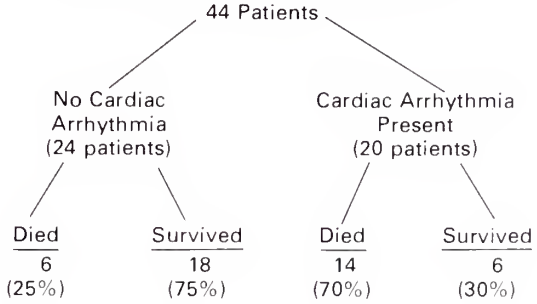
The most common etiologic agent in the development of an arrhythmia was pre-existing cardiac disease (10; 50 percent); drugs, particularly Digitalis, were incriminated as the causative agent in

(Continued on page 648)

Table 1: Bacteriologic Findings on Blood Culture

Organism	Site	No.	Percent
Proteus M.	Kidney Lung Peritoneum	13	30
Pneumococcus	Lung Meningitis	11	25
E. coli	Kidney Peritoneum	7	15
Pseudomonas A.	Lung Wound	5	10
Aerobacter	Peritoneum Lung	4	10
Staph.	Heart	4	10
Total		44	100

Table 2: Fate of Septic* Patients


44 Patients
No Cardiac Arrhythmia (24 patients)
Cardiac Arrhythmia Present (20 patients)
Died
6
(25%)
Survived
18
(75%)
Died
14
(70%)
Survived
6
(30%)

*Overall mortality — 45%

Doctor Kirkpatrick is associate professor of surgery and Doctor Wilson is assistant dean for Detroit General Hospital Affairs, both at Wayne State University School of Medicine.

When serum cholesterol demands attention...

patients may need...
- Diet control
- A proven cholesterol-lowering adjunct to diet*
- Convenient once-a-day dosage*
- Reasonable cost*

*Choloxin®

(sodium dextrothyroxine)

An agent for low density lipoproteins, "type II hyperlipidemia," in euthyroid, non-cardiac patients.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

See reverse side for full prescribing information

Choloxin® (sodium dextrothyroxine)

The Lipid-Lowering Agent with Once-A-Day Dosage

Four strengths . . . 1, 2, 4, and 6 mg. . . . are available making the scored tablet regimen a flexible dosage system. And, for most patients, CHOLOXIN tablets offer once-a-day dosage.

AN IMPORTANT NOTE:
It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

CHOLOXIN® (sodium dextrothyroxine) Single-Tablet-A-Day Dosage Schedules

See prescribing information in package insert reproduced below.

	Starting Dosage	Increased Monthly by	Usual Maintenance	Maximal Recommended
Adult Hypercholesterolemic	1.0-2.0 mg.	1.0-2.0 mg.	4.0-8.0 mg.	4.0-8.0 mg.
Pediatric Hypercholesterolemic	0.05 mg./kg. body weight	0.05 mg./kg.	0.1 mg./kg. body weight	4.0 mg.
Hypothyroid Cardiac	0.5-1.0 mg.	1.0 mg.	4.0 mg.	4.0 mg.

Choloxin®
(sodium dextrothyroxine)

Description

CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine. It is chemically described as D-3,5,3′,5′-tetraiodothyronine sodium salt.

Actions

The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

Most of the available evidence indicates that CHOLOXIN stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces. Cholesterol synthesis is not inhibited and abnormal metabolic end-products do not accumulate in the blood.

Indications

This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease.

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication.

Before prescribing, note the following: Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively in patients with significant myocardial impairment. CHOLOXIN dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications

The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease, including angina pectoris; history of myocardial infarction; cardiac arrhythmia or tachycardia, either active or in patients with demonstrated propensity for arrhythmias; rheumatic heart disease; history of congestive heart failure; and decompensated or borderline compensated cardiac status.
2. Hypertensive states (other than mild, labile systolic hypertension).
3. Advanced liver or kidney disease.
4. Pregnancy.
5. Nursing mothers.
6. History of iodism.

Warnings

CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care. Special consideration of the dosage schedule of CHOLOXIN is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels. Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN. As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients, and in surgery in hypothyroid patients in whom it may be advisable to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who had required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age

Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug; it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions

It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly, they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHOLOXIN for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions

The side effects attributed to dextrothyroxine therapy are, for the most part, due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient, although its relationship to CHOLOXIN therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN; a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration

For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN is approximately 0.1 mg per kilogram. The initial daily dosage should be approximately 0.05 mg per kilogram to be increased in up to 0.05 mg per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

How Supplied

CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4, and 6 mg tablets.

FLINT LABORATORIES
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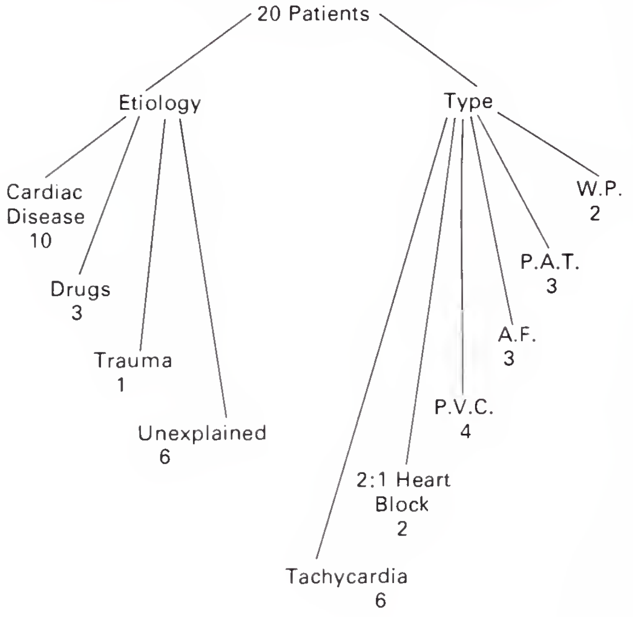
three cases and direct trauma in one. The remaining six patients had arrhythmias which could not be explained other than as a cardiac response to the septicemia. In these six patients, at the time of the development of the arrhythmia, metabolic studies were normal. The type of arrhythmia **(Fig. 3)** varied among the 20 patients. The most common was severe sinus tachycardia (140 to 150 beats per minute) which occurred in six patients; four developed multifocal premature ventricular contractions; three developed atrial fibrillation; three, paroxysmal atrial tachycardia; two, a wandering pacemaker; and two, a 2:1 heart block.

There was no correlation between the organism present in the blood stream, the site of infection, and the development of the arrhythmia. In patients with explainable arrhythmias, particularly those associated with pre-existing cardiac disease, most were greater than 50 years of age. However, among the group who developed an unexplained arrhythmia, there was no age correlation.

Table 3: Profile of Cardiac Arrhythmias



Discussion

Little attention has been paid, in the past, to the development of cardiac arrhythmias in association with septicemia.[2] It is now recognized that a common patient response to sepsis is the development of a high output state characterized by an increased cardiac output and a low peripheral resistance.[3,4] Tachycardia almost always occurs, but characteristically has been described as less than 120 beats per minute; the prevalence of arrhythmias and their significance has not been noted consistently.

This study illustrates that almost 50 percent of septic patients will develop an arrhythmia during their illness if they are closely monitored. The presence of the arrhythmias has significant prognostic implications. As noted in our study, the mortality rate was nearly three times as high among the group developing arrhythmias as among those not developing arrhythmias. It might be argued that this higher mortality rate was attributable to the presence of pre-existing cardiac disease; however, among those in whom no pre-existing cardiac disease was present, the same high mortality rate prevailed. It is of particular interest to note that almost one-third of the patients had no predisposing cause to explain the arrhythmia other than the sepsis itself.

It has been previously noted that the development of an arrhythmia may be the earliest sign of a septic crisis.[1] In these patients, a high index of suspicion is mandatory if prompt therapy for the sepsis is to be undertaken. Treatment of the arrhythmia is necessary, but it is important to recognize that therapeutic success with the arrhythmia had no effect on the progression of the sepsis. In fact, successful therapy of the arrhythmia may create a false sense of security rather than alert the physician to the possibility of an impending catastrophe.

Thus, the presence of an arrhythmia while a patient is septic is an ominous sign and should forewarn the physician that maximum therapy is indicated in this high risk group. It is also hoped that when a patient develops an unexplained arrhythmia, the physician will be alerted to the possibility of an impending septic crisis and will take necessary steps to monitor the patient closely, anticipating that a catastrophe may be imminent.

Acknowledgements

Supported by the Detroit General Hospital Research Corporation; Presented at the section on general surgery at The American Medical Association June 1973, New York, New York.

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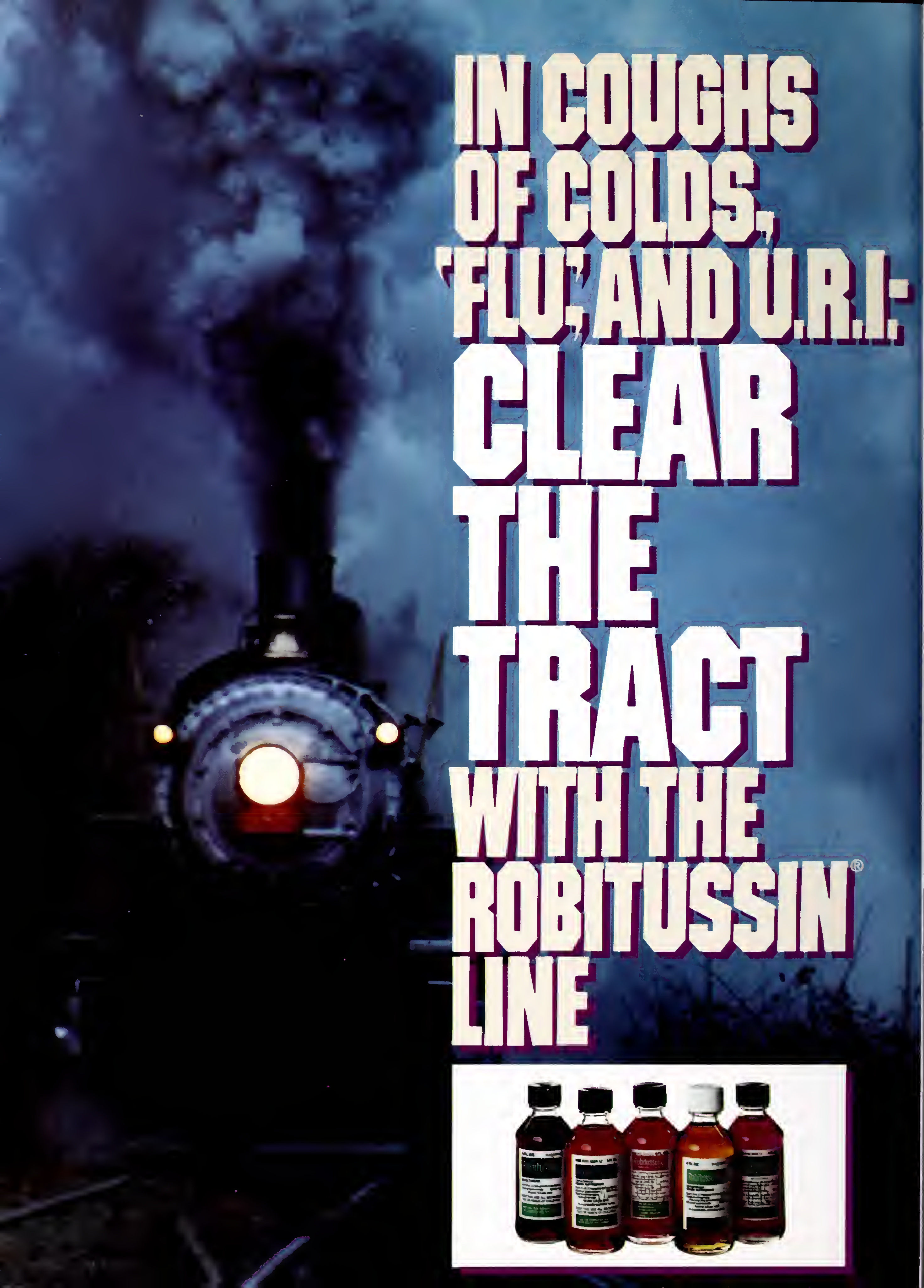
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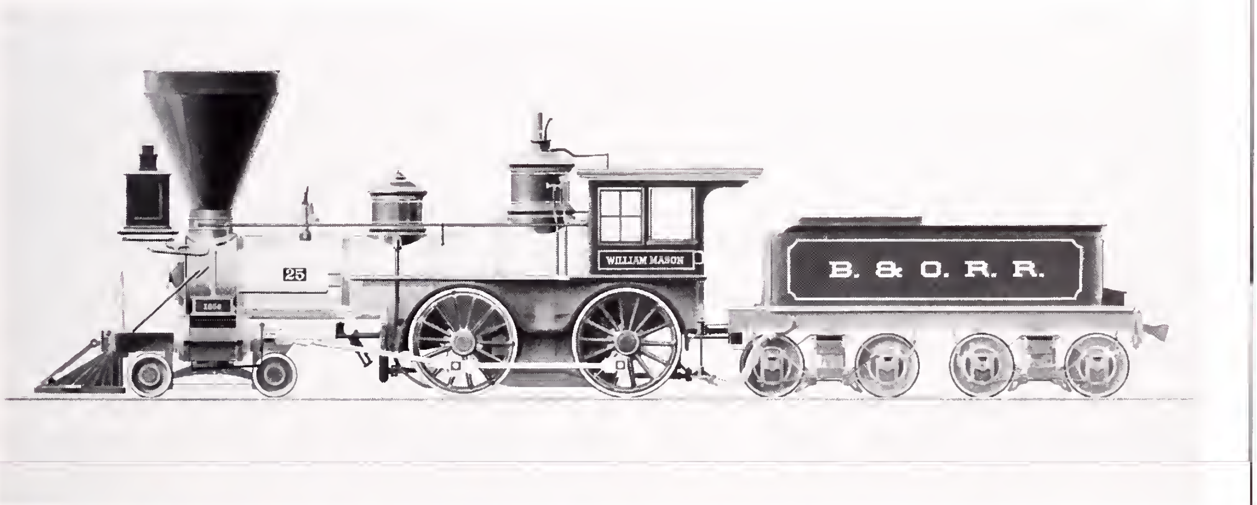

The William Mason (1856)

MEETINGS

Oct. 14-16—Postgraduate course, "Cardiology for Internists," Towsley Center, University of Michigan Medical Center*

Oct. 15-16–Fall Meeting, Southwest Michigan Perinatal Association, in Kalamazoo, contact: Neonatology Service, Bronson Methodist Hospital, 252 E. Lovell, Kalamazoo, 49006

Oct. 16-17—Michigan Infection Control Conference, Kellogg Center, East Lansing, contact: Ann Tsiminakis, Room 23, Kellogg Center, East Lansing, 48824

Oct. 24–Arbitration Seminar, sponsored by Michigan Hospital Association at Kellogg Center, East Lansing, contact: Patric Ludwig, president, MHA, 2213 E. Grand River Ave., Lansing, 48912

Oct. 27-29–Postgraduate course, "Steroid Hormone Action and Cancer," for basic scientists and clinicians, Towsley Center, University of Michigan Medical Center*

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Oct. 29–Seminar, "Making Health Teams Work," sponsored by Michigan Joint Practice Commission, University Club, East Lansing, contact: Merwyn Scholten, MSMS headquarters

Oct. 30-31–Northern Regional Public Health Conference, Holiday Inn, Traverse City, contact: Michigan Public Health Association, 403 Seymour Ave., Lansing

Nov. 3-5–"Pulmonary Disease Workshop for family physicians and internists," at Towsley Center, University of Michigan Medical Center*

Nov. 5–The Council, MSMS headquarters, contact: Warren F. Tryloff, director

Nov. 5—Tenth Annual Professional Symposium, "New Challenges of Arteriosclerosis — Children and Adults," sponsored by Professional Education Committee of the Kent County Heart Unit, Michigan Heart Association at Hoffman House and Midway Motor Lodge, Grand Rapids, contact: Mohammad Riabi, MD, 21 Michigan St., NE, Grand Rapids, 49502

Nov. 6-7–Human sexuality workshops for health professionals, Towsley Center, University of Michigan Medical Center*

Nov. 7-8–Postgraduate conference for anesthesiologists, Towsley Center, University of Michigan Medical Center*

Nov. 11-13–1975 MSMS Annual Scientific Meeting, Michigan Inn, Southfield, contact: Helen Schulte, MSMS headquarters

Nov. 12—Program, "Health Care in the People's Republic of China," 9:30 a.m. to 3:30 p.m., Scott Hall, WSU, contact: Marilyn Heins, MD, assoc. dean for student affairs, WSU School of Medicine, Scott Hall, 540 E. Canfield, Detroit, 48207.

Nov. 20-22–Postgraduate conference on plastic surgery for general surgeons, Towsley Center, University of Michigan Medical Center*

Nov. 22–"Family Practice Topics," cosponsored by Michigan Academy of Family Physicians, Towsley Center, University of Michigan*

Nov. 29-Dec. 2–AMA Clinical Convention, Honolulu

Dec. 3–Postgraduate course, "Cardiology for Family Physicians," sponsored by Michigan Academy of Family Physicians, Towsley Center, University of Michigan Medical Center*

Feb. 10-17–Medical Specialty Review Seminar, Snowmass-at-Aspen, sponsored by Leonard Wolin, MD, contact: Doctor Wolin, 2216 Medford Road, Ann Arbor, 48104

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*Contact Robert K. Richards, director, Office of Intramural Education, Room 6-1109, Towsley Center for Continuing Medical Education, University of Michigan Medical Center, Ann Arbor, 48104.

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Club members will fly a United Airlines 223-seat Super DC8 charter (complimentary cocktails and hot meal service) departing Detroit Metro at 6 p.m. on Tuesday and returning late the following Tuesday. We fly to Grand Junction and take chartered buses to Snowmass (2 ½ hrs.). Deluxe accommodations are at the Stonebridge Inn and Wildwood Inn, which are located in Snowmass Village within easy walking distance of the main slope and ski lifts. Lift tickets can be purchased through M. Guerin Tours, Inc. at wholesale cost. *The March 20-27 trip is a special Marquette, Michigan flight for upper peninsula and northern lower peninsula members. These trip dates overlap the flight from Detroit, March 23-30. There will be a joint scientific program.*

3 *SUN VALLEY*
Feb. 13-20, 1976
(Fri. to Fri.)
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Club members will share a United Airlines 223-seat Super DC8 charter (complimentary cocktails and hot meal service) with the Snowbird Ski Club, departing Detroit Metro at 4 p.m. Friday, Feb. 13, and returning late Friday, Feb. 20. We fly to Boise and take chartered buses (2 ½ hrs.) to Sun Valley. Accommodations are Bonnie Vie and Indian Springs condominiums (two & three bedrooms with kitchen and living room), located in Elkhorn Village complete with outdoor pool, grocery store and restaurants. Lift tickets will be available through M. Guerin Tours, Inc. at wholesale cost.

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☐	Sun Valley	Feb. 13-20, 1976	$289

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Here are Program Highlights For MSMS Scientific Meeting Nov. 11-13

Michigan physicians of nearly every specialty will hear national and statewide experts discuss the latest advances in their fields at the 110th annual MSMS Scientific Meeting Nov. 11-13 at the Michigan Inn, Southfield.

The expanded three-day meeting is planned by nearly 30 Michigan specialty organizations and sponsored by MSMS as a major benefit to MSMS members. There is no registration fee for anyone attending the meeting. Nurses, medical assistants and medical students also are invited to the scientific and clinical sessions.

Also planned are seminars on practice management, arbitration of professional liability disputes, the new continuing medical education requirements; a doctors' art show, MDPAC workshop featuring a national authority on political involvement.

Highlights of the program appear on the following pages. A more complete program appears in the Sept. 19 *Medigram*

TUESDAY, NOV. 11

Continuing Education Seminar

9:30 a.m. "New Continuing Medical Education Requirements," Bert Brennan, executive director, Michigan Medical Practice Board

Emergency Medicine

10:30 a.m. Half-hour sessions on "Drug Interaction," Gene Denbecky, MD; "Anaphylactic Shock," Paul Steinberg, MD; and "The Forensic Implications and Defenses of Drug Interaction," William A. Brookoff, MD.

Noon "The Status of EMS Legislation in Michigan"

Neurology/Neurological Surgery

4:00 p.m. "Recent Advances in Medical and Surgical Treatment of Pain," Norman C. Shealy, MD, LaCrosse, Wis.

Proctology/Colon and Rectal Surgery

4:00 p.m. "What's New in Colon and Rectal Cancer," LaSalle D. Leffall, Jr., MD, Washington, DC, chairman, Howard University Medical School Department of Surgery

Public Health/Preventive Medicine

2:00 p.m. "The National Health Planning and Resources Development Act: What It Is and What It Means," Jay G. Endsley, Lansing, director, Office of Health and Medical Affairs

Arbitration Seminar

3:30-5:30 p.m. "Understanding the Arbitration Process re Professional Liability Disputes," Bruce W. Ambrose, manager, MSMS Department of Government Relations

WEDNESDAY, NOV. 12

Allergy/Applied Immunology

Noon-2:00 p.m. Luncheon, followed by "Cutaneous Basophil Hypersensitivity," Harold F. Dvorak, MD, professor of pathology, Harvard University Medical School, and staff, Massachusetts General Hospital

(Continued on page 656)

U-M Media Library Plans Programs During MSMS Meeting

Physicians attending the 110th annual MSMS Scientific Meeting Nov. 11-13 in Southfield will have the opportunity to gain continuing medical education credit by attending the many and varied meetings planned by specialty societies.

In addition, they may earn credit by viewing and listening to the taped continuing education programs offered by the University of Michigan's Media Library. The Media Library is accepted for continuing medical education credit by the American Academy of Family Physicians, the American Medical Association, the American Osteopathic Association and the College of Family Physicians of Canada.

The Media Library will be based in two rooms on the second floor of the Michigan Inn, just above the meeting rooms for the MSMS Scientific Meeting. Demonstrator models will be exhibited on the meeting's main floor and directions given to the programs being staged above.

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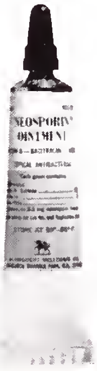

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Exhibitors Support MSMS Meeting

Education and interest are added to the MSMS Scientific Meetings by the many exhibitors who set up and display their products and ideas for the examination of physicians attending the meeting.

Ample time is afforded to doctors to browse through the exhibits between scientific meetings. Beer and pretzels will be served in the exhibition hall as an added attraction.

The exhibitors provide the financial boost that makes the annual scientific meeting possible, and MSMS members are urged to visit their booths.

Following is a list of the exhibitors for the 1975 Scientific Meeting:

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PROGRAM/*Continued*

Clinical Pharmacology and Therapeutics/Surgery

2:00-6:00 p.m. Half-hour sessions on "Antibiotic Considerations in Surgery of the Abdomen." Speakers are Edward S. Judd, MD, Rochester, Minn., senior staff surgeon, Mayo Clinic and professor of surgery at Mayo Medical School; J. Wesley Alexander, MD, Cincinnati, professor of surgery and director of the Transplantation Division, and acting director, Hoxworth Blood Center, University of Cincinnati; Nabil F. Maklad, MD, Eloise, U-M assistant professor of radiology and chief, Diagnostic Ultrasound Division, Department of Radiology, Wayne County Hospital; John G. Bartlett, MD, Boston, Tufts University associate professor; and F. Robert Fekety, Jr., MD, Ann Arbor, U-M professor and head, Section of Infectious Diseases, U-M Medical Center.

Continuing Education Seminar

9:30 a.m. "New Continuing Medical Education Requirements," Bert Brennan, executive director, Michigan Medical Practice Board

Dermatology

Noon-1:45 p.m. Luncheon and program, "Detection of Drug Sensitivity," Walter B. Shelley, MD, Philadelphia, professor and chairman of dermatology, University of Pennsylvania School of Medicine

Obstetrics-Gynecology

9:30 a.m. Panel on "Health Care for Women — Expectations and Fulfillment"

Speakers are Barbara Bland, RN, Louisville, president, Nurses Association, American College of Obstetricians and Gynecologists; Joan Goldstein, Princeton, NJ, former national coordinator, Women's Health Task Force, National Organization for Women; Richard T. Mellis, MD, Kalamazoo, chairman, MSMS Subcommittee on Better Utilization of OB Beds, board of directors, Perinatal Association of Michigan; J. Robert Willson, MD, Ann Arbor, professor of ob-gyn, U-M Medical Center, and Joan C. Stryker, MD, Detroit, WSU assistant professor and chief, Outpatient Department, Hutzel Hospital.

Noon Dinner and program, "Political Decision-Making related to Medical Issues," C. Patrick Babcock, Lansing, Governor's executive assistant for legislative affairs.

Opthalmology

4:00 p.m. "Emergency Room Care of Ophthalmic Emergencies," Donald E. Willard, MD, Philadelphia

Orthopedic Surgery

4:00 p.m. Subject and speaker to be announced. Dinner and scientific program, subject and speaker to be announced.

Otolaryngology

11:00 a.m. Subject and speaker to be announced.

Pediatrics

3:00-5:30 p.m. "Progress in Neuroendocrinology," Melvin M. Grumbach, MD, San Francisco, chairman, University of California Department of Pediatrics.

Panel, "Perinatal Endocrinology," Kamran S. Moghissi, MD, Detroit, WSU Ob-Gyn Department; Nansen Liu, MD, Troy; Enrique Ostrea, MD, Detroit, director of University Nurseries, Hutzel Hospital

7:30 p.m. Dinner and scientific program, "Historical Perspectives in the Development of Child Care," Robert H. Gregg, MD, Detroit, president of the staff, Children's Hospital of Michigan

Plastic Surgery

Noon to 1:45 p.m. Luncheon and program, "The Management of Acute Fracture of the Forehead and Subsequent Reconstruction with Bone Cement," Richard C. Schultz, MD, Park Ridge, Ill., associate professor, Division of Plastic Surgery, Abraham Lincoln College of Medicine; head, Division of Plastic Surgery, University of Illinois Hospital and Lutheran General Hospital

Urology

2:00 p.m. "The Urologist and the Child," Alan D. Perlmutter, MD, Detroit, Professor of Urology, Wayne State University Medical School, and Chief, Department of Pediatric Urology, Children's Hospital of Michigan

THURSDAY, NOV. 13

Anesthesiology

Noon-2:00 p.m. Luncheon and scientific program, "Biotransformation and Toxicity of Anesthetics," Helmut F. Cascorbi, MD, Cleveland, professor of anesthesiology and associate professor of pharmacology, Case Western Reserve University

Family Medicine

2:00-3:15 p.m. Subject and Speaker to be Announced

Gastroenterology

4:00 p.m. "The Irritable Bowel Syndrome and Diverticular Disease," Marvin M. Schuster, MD, Baltimore, chief, Gastrointestinal Division, The Baltimore City Hospitals, associate professor of medicine and assistant professor of psychiatry, Johns Hopkins University

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Practice Management Seminar Scheduled At 9 a.m. – Nov. 13

Michigan physicians who want to know more about running their offices smoothly, the pros and cons of PCs, the merits of a living trust, and keeping up with business costs may gain valuable advice on all four at the 110th annual MSMS Scientific Meeting Nov. 11-13 in Southfield.

The Bureau of Economic Information, MSMS, again will present one of its popular seminars on practice management during the Scientific Meeting. The two-hour seminar is scheduled at 9 a.m. Nov. 13 at the Michigan Inn.

Speakers will include Tim Hogan, Ann Arbor, Practice Management Associates, who will discuss better use of office personnel and their time, better accounting and auditing procedures and most efficient office layout. Lee Malison, senior vice president and trust officer of Michigan National Bank, will offer physicians tips on trusts and estates for guaranteed substantial savings.

John Anthony, chief, MSMS Bureau of Economic Information, will talk about keeping up with business costs in the 70's, and William Hodgman, Detroit attorney, will describe the ramifications of a professional corporation and how it can best serve the interests of the physician.

Internal Medicine/Diabetes/Kidney

2:00 p.m. Panel presentation on "Diabetes and Hypertension," with Benjamin Spargo, MD, Department of Pathology, University of Chicago Medical School;

Howard Goldstein, MD, Senior Physician, Joslin Clinic, Boston;

John R. Caldwell, MD, Detroit, Division of Metabolic Diseases, Henry Ford Hospital, and clinical professor of internal medicine, U-M, Medical School

Richard D. Hohl, MD, Detroit, associate physician, Division of Metabolic Diseases, Henry Ford Hospital.

4:00-5:30 p.m. Panel discussion continued with Nathan W. Levin, MD, Detroit, Chief, Division of Nephrology, Henry Ford Hospital

Occupational Medicine/Industrial Medicine

12:00-2:00 p.m. Luncheon and Scientific Program, "Engineering for Air and Water Quality," Edward R. Bangel, Warren, Supervisor, Facilities and Environmental Engineering Department, Chevrolet Motor Division

Practice Management Seminar

9:00 a.m. Presentation on "Keeping Up With Business Aspects of the Seventies," John Anthony, Chief, MSMS Bureau of Economic Information

Psychiatry

7:30 p.m. Dinner and Scientific Program, Panel on "The Suicidal Physician — The Family's Role in Treatment," Viggo Jensen, MD, Harper Woods, associate professor of psychiatry, WSU School of Medicine; Thomas A. Petty, MD, Grosse Pointe, clinical professor of psychiatry, WSU School of Medicine; Herbert A. Raskin, MD, Southfield, clinical professor of psychiatry, WSU School of Medicine; Douglas A. Sargent, MD, Grosse Pointe, assistant clinical professor, Dept. of Psychiatry, WSU School of Medicine and Director of Psychiatric Education, Cottage Hospital; Sidney Bolter, MD, Southfield, Chairman of the Department of Psychiatry, Providence Hospital

PSRO Support Center Plans Booth

Staff from the Michigan PSRO Support Center, East Lansing, will man a special booth in the exhibition hall at the MSMS Scientific Meeting, Nov. 11-13, Michigan Inn, Southfield, to distribute literature to interested physicians and answer questions on PSROs in Michigan today.

Physicians Nurses, Pharmacists To Meet Oct. 29

"Making Health Teams Work" is the theme of a special seminar scheduled for October 29 at the University Club in East Lansing. Sponsored by the Michigan Joint Practice Commission, the all-day seminar will examine the roles of health professionals as they work together to improve health care services and delivery.

Keynote speaker for the event will be Harold Wise, MD, co-director of the National Institute for Health Team Development and author of the book entitled, "Making Health Teams Work."

Political Involvement Theme of MDPAC Workshop

A national authority on political involvement will lead the annual MDPAC workshop scheduled at 5 p.m. Nov. 12 during the MSMS Scientific Meeting. The dinner meeting at the Michigan Inn, Southfield, site of the Scientific Meeting, will feature Gene Dyson, president of the Georgia Business and Industry Association.

Also speaking will be State Sen. Earl Nelson (D-Lansing). The meeting theme will be the need for legislative activity by physicians.

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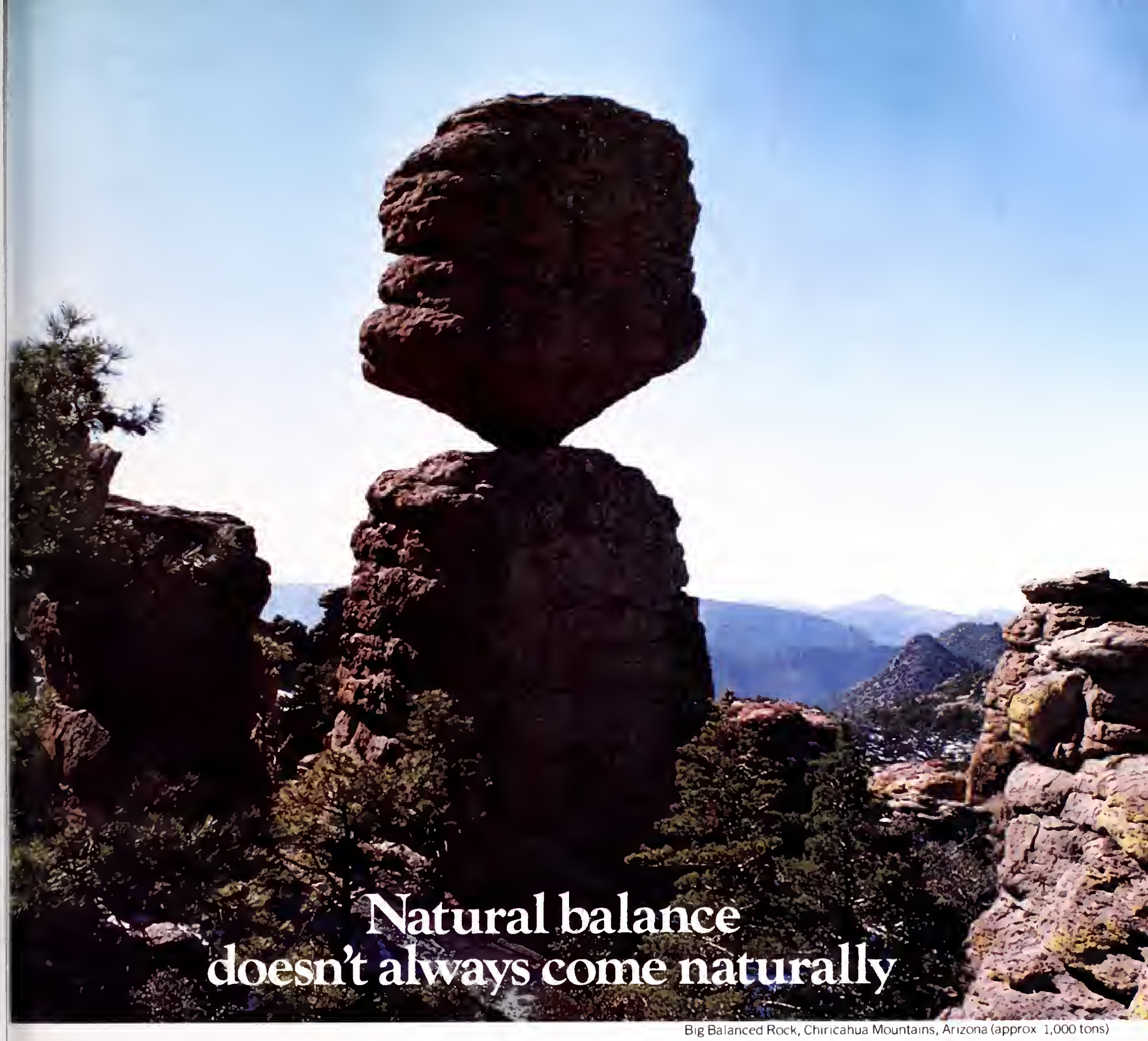

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- ☐ Also available as Antivert (meclizine HCl) 12.5 mg. scored tablets, for dosage convenience and flexibility.
- ☐ Antivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for nausea, vomiting and dizziness associated with motion sickness.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*

Opinion & Dialogue

Should a specially prepared package insert be made available to patients?

Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration

The idea of a so-called patient package insert has been around for a long time. Many physicians already use written instruction sheets to provide patients with information about the drugs they are taking. And some physicians give verbal instructions; but in too many instances these are what I call eye-glazing exercises. I have seen patients sit with glazed eyes listening to a rapid-fire lecture by a hurried physician who has 20 people out in his waiting room. These patients aren't given sufficient understanding and therefore do not follow instructions. So I think the idea of an official package insert for patients is a good one. Perhaps we should really think of this kind of information simply as an extension of drug labeling.

The benefits of patient involvement

Many physicians may not realize how frequently a patient obtains his drug information from Aunt Tillie or the next door neighbor. And this information is almost always bad or irrelevant to the case at hand. Furthermore, the incentive to go along with a prescribed program is slim if the only reading matter the patient receives, along with his prescription, is a bill.

As an educator I am impressed by the principle that the best way to get someone to do something is to involve him in the process. So the

---

Dr. James H. Sammons
Executive Vice President
of the American
Medical Association

I think there are advantages as well as some real disadvantages in a patient package insert. When you begin to use semi-medical or medical terms to describe complications or possible sequelae of disease or treatment, you may frighten the patient—particularly since the more highly sophisticated patient is not the one who is going to read the insert. The patient who will read it is the one most susceptible to fright and confusion by the language.

On the positive side, a package insert will probably give the patient better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove from the physician the need or obligation to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be warned of the possibility of serious side reactions—to know what the real dangers are. But it doesn't do a bit of good to indicate that a patient on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that fright engendered by the insert may possibly outweigh the potential good.

main purpose of drug information for the patient is to get his cooperation in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass information from physicians, medical societies, the pharmaceutical industry and centers of medical learning. The ultimate responsibility for uniform labeling must, however, rest with the Food and Drug Administration. There is nothing wrong with this agency saying, "this information is generally agreed upon and therefore it should be used," as long as our process for getting the information is sound.

Distribution of the information is a problem. In great measure it would depend on the medication in question. For example, in the case of an injectable long-acting progesterone, we would think it mandatory to issue two separate leaflets—a short one for the patient to read before getting the first shot and a long one to take home in order to make a decision about continuing therapy. In this case, the information might be put directly on the package and not removable at all. But for a medication like an antihistamine this information might be issued separately, thus giving the physician the option of distribution. This could preserve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socio-economic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

Only the doctor can remove that fear by 20 or 30 minutes of conversation.

I'm not suggesting that we withhold any information from the patient because, first of all, it would be totally dishonest and secondly, it would defeat the very purpose of the insert. I do think that a patient on the birth control pill should know about the incidence of phlebothrombosis.

If you're going to tell a patient the incidence of serious adverse reactions, then you have to tell him that a concerned medical decision was made to use a particular medication in his situation after careful consideration of the incidence of complications or side effects.

Emotionally unstable patients pose a special problem

There are patients who, because of severe emotional problems, could not handle the information contained in a patient package insert. Yet if we are going to have a package insert at all, we just can't have two inserts. I think we might simply have to tell the families of these patients to remove the insert from the package.

Legal implications of the patient package insert

Just what effect would a patient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert

The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

P·M·A

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Each capsule contains 50 mg.
of Dyrenium® (brand of triamterene)
and 25 mg. of hydrochlorothiazide.

makes sense

For long-term control of hypertension*

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

* WARNING
This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

'DYAZIDE'

Just once or twice daily for maintenance. Hydrochlorothiazide to help keep blood pressure down and triamterene to help keep potassium levels up.

Putting out the fires of arthritic pain

Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed: "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."*

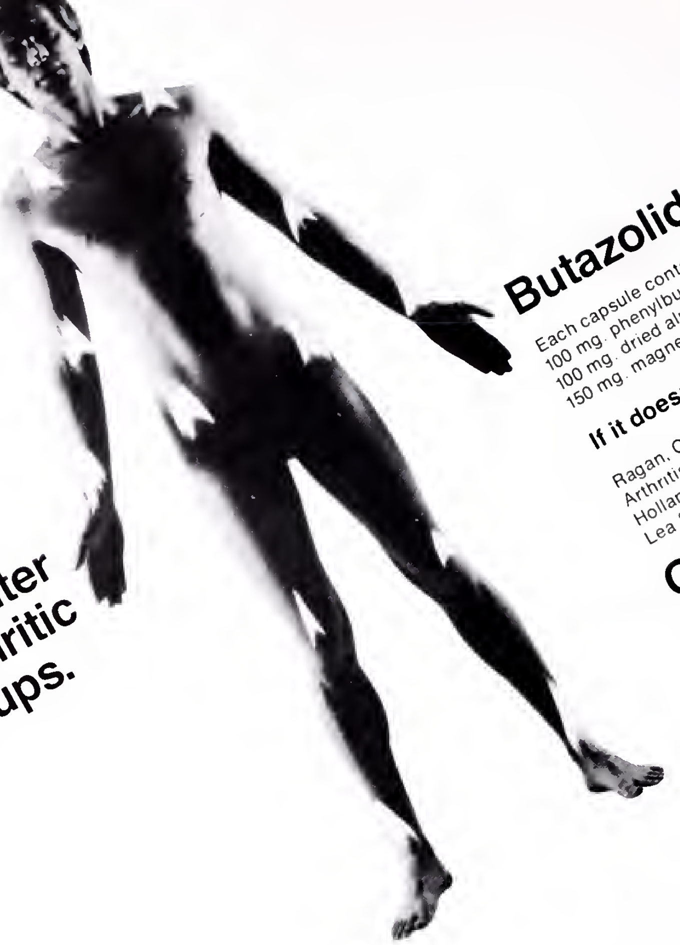
If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.

Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.



Fire fighter for arthritic flare-ups.

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.

Ragan, C.: The Clinical Picture of Rheumatoid Arthritis, in Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335.

Geigy

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of fever, sore throat, oral lesions (symptoms of blood dyscrasia), dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.

Contraindications: Children 14 years or less, senile patients, history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias, renal, hepatic or cardiac dysfunction, hypertension, thyroid disease, systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions, complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug, its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy, CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia, ulcerative stomatitis, salivary gland enlargement.
(B)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

BU 10259

October is Immunization Action Month

Immunization Action Month was initiated in 1973 to help reverse a trend of declining immunization levels among children one to four years of age in this country. For example, with poliomyelitis vaccine, 84.1 percent of the preschoolers in this country were adequately protected in 1963. By 1974 the proportion declined to 63.1 percent. Adequate protection has been defined for this purpose as three or more doses of vaccine.

All physicians and clinics are urged to review the immunization status of all their patients and update when necessary.

Michigan Department of Public Health

SUGGESTED MINIMUM SCHEDULE FOR THE ACTIVE IMMUNIZATION OF INFANTS AND CHILDREN

2 – 3 months	**1st dose DTP . . . . OPV (Trivalent)[2]**
4 – 8 weeks	**2nd dose DTP . . . . OPV (Trivalent)**
4 – 8 weeks	**3rd dose DTP . . . . OPV (Trivalent)**
12 – 24 mos. DTP	**4th dose (supporting) OPV[3] (Trivalent)**
	Tuberculin test[4] **Measles, Rubella and Mumps Vaccines (or combined MR or MMR)**
5 years	**(Booster) OPV (Trivalent)** **Measles, Mumps, or Rubella* Vaccines (If not previously administered).**
15 years	**Td (adult booster) (every 10 years thereafter)**

Key:

DTP = Diptheria, tetanus, pertussis.
OPV = Oral polio vaccine (Trivalent).
MR = Measles, rubella (live attenuated virus vaccine).
MMR = Measles, mumps, rubella (live attenuated virus vaccine).
Td = Tetanus, diptheria (adult).

Over 6 years of age **(No Previous Inoculations)**

Td (adult)	**2 doses not less than one month apart. Third dose (supporting) six months to one year later. Booster every 10 years thereafter.**
OPV (Trivalent)	**two doses given at least eight weeks apart followed in one year with a third dose.**

Measles, Mumps, or Rubella* Vaccines (If not previously administered.)

*Caution should be used in administering rubella vaccine to post-pubertal females.
Check precautions in manufacturers package insert.

NOTE:

1. This schedule is meant to be a guide only and should be used, at the physician's discretion, after considering the individual needs of the patient.
2. Inactivated polio vaccine (Salk) either singly or in combinations with diphtheria, tetanus and pertussis antigens are available from MDPH and may be substituted for attenuated live polio vaccine (Sabin). Consult package insert for recommended schedules.
3. Routine small pox vaccination is not felt to be necessary at present to protect the public health. If primary vaccination is indicated, in the judgement of the physician, the second year of life is the optimum period for this procedure. Consult package insert for contraindications.
4. Depends on risk of exposure and prevalence of disease in population groups. Future testing at physician's discretion.

Is A Rubella Vaccinated Child a Hazard For a Pregnant Mother, Sister or Teacher?

This is a question still debated by some physicians. The consensus of medical opinion and all documented evidence indicates there is no hazard. In fact, children were chosen as prime targets for immunization because, if not immunized, they may become infected with the natural disease and spread it to a susceptible pregnant female.

The statement of the Public Health Service Advisory Committee on Immunization Practices[1] is: "Excretion of the live attenuated rubella virus from the throat has occurred in the majority of susceptible individuals administered rubella vaccine. There is no definite evidence to indicate that such virus is contagious to susceptible persons who are in contact with the vaccinated individuals. Consequently, transmission, while accepted as a theoretical possiblity, has not been regarded as a significant risk."

Saul Krugman, MD, and Samuel L. Katz, MD, in an excellent review article in the *New England Medical Journal*[2], state: "The potential problem of communicability is no longer an issue of concern. A number of studies have confirmed that immunized children are not contagious. They have not transmitted the attenuated infection to their susceptible pregnant mothers or school teachers. Consequently, pregnancy that is a contraindication to vaccination of the mother *is an indication* for vaccination of her child because an unimmunized susceptible child may introduce wild rubella into the household."

This should allow the immunization of all children, whether or not their mothers are pregnant. It should also relieve school administrators and pregnant teachers. An article in the *American Journal of Diseases of Children*[3] speaks specifically to the non-problem of the pregnant teacher relative to rubella vaccination of her pupils: "Sixty-seven elementary school teachers were tested serologically and found to be susceptible to rubella. These sentinel teachers were retested after a largescale rubella immunization campaign was carried out among the pupils in their schools. None of the 67 teachers developed serological evidence of rubella infection. Thus, there was no evidence of vaccine virus spread."

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1. Morbidity and Mortality Weekly Report, 20 (34): 304-305 August 28, 1971.
2. Krugman, S. and Katz, S.L., *New England Journal of Medicine*, Vol. 290, No. 24 pp. 1375-1376, June 13, 1974.
3. Fleet, Wm., et al., *American Journal of Disease of Children*, Vol. 123, January, 1972.

Established 1924

MERCYWOOD HOSPITAL

4038 Jackson Road
Conducted by Sisters of Mercy
Ann Arbor, Michigan
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Mercywood Hospital is a private neuropsychiatric hospital licensed by the Michigan Department of Mental Health. Mercywood specializes in intensive, multi-disciplinary treatment for emotional and mental disorders.

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Commentary

Hearing Conservation in Michigan

By Stanley W. Coulthard, MD
Ann Arbor
Gordon N. Ryner, MA, CC-A
Lansing

October is the month when otological examinations of school-age children begin. And it behooves the family doctor, according to the authors of the following article, to carry a large burden of responsibility for follow-up and care of children referred for medical testing from the otological screening clinics. It is because of these reasons that we present this article at this time.

(Continued on page 670)

TABLE I

	Phase I Screening		Phase II Threshold Testing		Phase III Medical Ref.		Phase IV Oto Clinic	
	School	Pre. Sch.	School	Pre. Sch.	School	Pre. Sch.	No. of Clinics	Children Seen
Allegan	5,982	35	521	10	79	3	3	69
Baraga	698	219	41	4	11		1	11
Barry	3,434	132	778	45	106	7	3	114
Bay	8,356	12	327		189		5	154
Berrien	13,761	2,209	1,563	265	542	73	4	142
Branch	5,030	255	171	13	66	7	7	225
Calhoun	10,779	283	238	94	163	51	4	56
Cass	3,178	370	61	11	28	11	k	35
Chippewa	2,602	5	81	2	15	1	2	78
Dickinson	2,368	30	84	19	42	14	2	51
Eaton	7,578	63	254	14	198	12	6	206
Genesee	11,673	2,343	312	17	165	10	3	96
Gogebic	1,399	321	25	9	16	1	2	24
Grand Traverse	7,190	631	419	62	315	74	3	108
Hillsdale	4,446	591	103	23	63	13	See Branch	
Houghton	2,287	385	94	9	134	3	3	102
Huron	1,220	23	315	74	189	46	2	83
Ingham	15,892	2,577	824	138	433	127	Refer to private physician	
Ionia	6,090	1,422	484	99	120	2	3	78
Iron	1,523	25	20	1	9	1	1	18
Jackson	15,469	1,142	667	53	315	27	Refer to private physician	
Kalamazoo	10,580	2,312	427	112	249	79	7	321
Kent	33,265	1,413	1,917	40	876	26	Refer to private physician	
Lenawee	8,356	1,981	620	115	314	83	4	154
Livingston	5,304	472	273	51	165	30	4	156
Macomb	57,042	12,731	1,120	427	1,001	427	26	620
Manistee	3,646	614	112	42	94	39	1	58
Marquette	6,232	793	231	4	87	4	3	76
Mecosta	1,483	365	59	3	37	2	1	21
Midland	5,796	1,376	530	59	276	52	7	248
Monroe	11,170	1,689	1,140	83	231	22	5	181
Muskegon	7,005	2,805	505	103	306	83	5	175
Oakland	65,729	536	4,326	65	2,003	36	40	1,281
Ontonagon	1,697	73	88	2	57	2	2	40
Ottawa	11,772	2,199	848	107	361	78	Refer to private physician	
Saginaw	24,271	4,617	1,589	235	971	190	7	150
St. Clair	9,592	2,433	381	38	233	38	5	127
St. Joseph	6,655	563	217	5	109	2	See Branch	
Sanilac	3,582	53	367	8	247	7	4	150
Schoolcraft	3,916	12	291	3	124	3	3	106
Shiawassee	7,704	194	408	28	193	12	3	61
VanBuren	6,592	959	449	85	291	32	4	241
Washtenaw	15,975	3,200	1,690	390	1,030	360	16	425
Wayne	100,248	5,550	3,348	259	1,855	159	25	769
City of Detroit	100,841	8,015	3,509	291	2,049	254	74	1,499
Dist. No. 1	5,126	627	163	56	146	47	3	121
2	4,580	68	375	6	193	4	3	50
3	5,254	1,060	724	29	81	17	Refer to private physician	
4	6,367	510	855	42	334	10	4	129
5	5,703	1,232	538	67	192	45	1	55
Thumb Dist.	10,032	1,411	975	37	808	32	3	158
Sub Totals	676,470	72,956	35,459	3,754	18,111	2,658		
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Introduction

Childhood hearing problems are often the result of progressive suppurative, serous or congenital ear disease. These problems are commonly insidious in their onset. Detection during the first years of life is usually dependent on parental observation. Many mild to moderate hearing losses are overlooked until the educational process is well underway. This means a child may be deprived of valuable educational and social experiences during the formative years of life.

The Michigan Department of Public Health started a pioneering program of hearing conservation in 1942. Annually three quarter million Michigan children are evaluated for hearing problems. The Hearing Conservation Program is directed towards preschool, school and mentally retarded children. The individual programs are established through city or county health departments under the direction of the Michigan Department of Public Health.

The present paper summarizes the five phase program of hearing evaluation which is now in operation. This is followed by a presentation of the practical application of these methods to statewide and county hearing evaluations.

Hearing Evaluation

The concept of early screening of the hearing level in school age children starts with an initial hearing test by an audiologic technician. Hearing abnormalities detected are than further evaluated by the supervising state audiologist. If the hearing loss is consistently present the child is referred to a medical doctor. The Hearing Conservation Programs are established through city or county health departments. The programs receive the assistance of state audiology and speech consultants who direct the five-phase testing program.

Phase One: Preliminary Frequency Screen

The initial testing screens at frequencies of 1,000, 2,000 and 6,000 Hz. A child who is unable to hear at any one frequency in either ear is

---

Doctor Coulthard is an assistant professor in the U-M Department of Otorhinolaryngology. Mr. Ryner is an audiology and speech consultant with the Michigan Department of Public Health.

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referred for a further hearing threshold evaluation in a second phase of testing.

Phase Two: Pure Tone Threshold Evaluation

The pure tone threshold evaluation determines more specifically the child's hearing level. Limited application of bone conduction audiometry provides additional information. The completed threshold test is then evaluated by the hearing technician utilizing standardized criteria of the Michigan Hearing Conservation Program.

Phase Three: Medical Evaluation

Children with significant hearing loss are invited to contact their family physician or to attend an otology clinic. Contact with the family is made by the public health nurse or school nurse.

Phase Four: Otology Clinic

The otology clinic is scheduled in the local community and is directed towards a medical evaluation and repeat audiometric testing when indicated. Participating medical doctors are otorhinolaryngology specialists from the local community or the Department of Otorhinolaryngology at the University of Michigan. A review of the child's medical history as it pertains to the ear disease is obtained. A complete head and neck evaluation is performed. These findings are then correlated with the audiometric results. The physician then makes recommendations for care. These recommendations are discussed with the parents at the time the clinics are held. In order to further emphasize the findings for a given patient, a formalized summary letter is mailed to the parents and family physician two weeks following the clinic.

Phase Five: Follow up

The recommendations rendered by the specialist can be directed to a physician of the parents' choosing. With the majority of these children the family physician directs the treatment program.

In the final analysis the usefullness of the hearing conservation program is dependent on the completion of treatment and follow-up examinations in order to detect continuing or neglected problems. The final phase of the hearing conservation program consists of audiometric testing and follow-up examinations by nurses. Children who have been referred for medical care are subjected to a threshold retest on an annual basis. This provides the necessary monitoring of the child's hearing.

Findings

A comprehensive review of statewide statistics from the hearing conservation program from July 1, 1973 to June 30, 1974 (**Table I**) reveal a total of

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Methyltestosterone	1.25 mg
L-lysine	100 mg
Nicotinic Acid	12.5 mg
Iron (from Ferrous Sulfate)	2.82 mg
Vitamin A	2,500 U.S.P. Units
Vitamin D	250 U.S.P. Units
Thiamine Mononitrate	2.5 mg
Riboflavin	2.5 mg
Ascorbic Acid	25.0 mg
Folic Acid	0.1 mg
Vitamin B-12	1.5 mcg
Methionine	12 mg
Choline Bitartrate	15 mg
Inositol	10 mg
Calcium Pantothenate	2.5 mg
Pyridoxine	0.25 mg
Copper (from Copper Sulfate)	0.25 mg
Zinc (from Zinc Oxide)	0.25 mg
Iodine (from Potassium Iodide	0.075 mg
Calcium (from Dicalcium Phosphate	72.5 mg
Phosphorus (from Dicalcium Phosphate)	55 mg
Potassium (from Potassium Sulfate)	2.5 mg
Manganese (from Manganese Sulfate)	0.5 mg
Magnesium (from Magnesium Sulfate)	0.5 mg

ACTION AND USES — DOSAGE: 1 tablet after breakfast and supper, or as required. In females, 3-week courses of therapy are recommended followed by a 1-week rest period. Withdrawal bleeding may occur during the rest period. **PRECAUTIONS:** Administer cautiously to female patients who tend to develop excessive hair growth or other signs of masculinization. **CONTRAINDICATIONS:** Patients in whom estrogen or androgen therapy should not be used, as in carcinoma of the breast, genital tract, or prostate, and in patients with a familial tendency to these types of malignancy. **AVAILABLE:** Bottles of 100 and 500 tablets. Rx only

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749,426 children screened. Of this group, 5% were referred for Phase Two evaluation. The Phase Two total number of patients contains both new problem cases of hearing and previously diagnosed problem cases requiring yearly follow up evaluation. In the third phase the medical evaluation is made by the family physician in 57% of the cases and a state otology clinician, 43% of the time. **Table I** summarizes the statewide experience for the 1973-74 year and breaks down the total patients by counties.

The Washtenaw County Hearing Conservation Program is an example of an active segment of the statewide program. In the year 1973-74 the Washtenaw health department program screened 19,195 children in the phase one testing. Children in this group with abnormal tests were then referred for further testing in the phase two program.

A total of 2,080 children were found to have hearing deficits during the initial testing. This represents 11% of the children tested in Washtenaw County.

In the Washtenaw County group, 1,390 patients were referred for medical evaluation. This represents 60% of the patients found to have a hearing loss. The children referred for medical care can choose their (1) family physician, (2) a private otologist, or (3) attend a state-sponsored otology clinic. State otology clinics are staffed by physicians from the Department of Otorhinolaryngology at the University of Michigan.

A majority (965) of children are taken either to the family physician or private otologist. The remainder are seen by the otology clinic physician. In Washtenaw County 16 clinics were held in the 1973-74 year. A total of 425 children were examined during these clinics. Multiple ear disease and associated problems were diagnosed.

Once the diagnosis is made, the patient is provided with a recommendation and advised to have follow up evaluation and treatment. The nursing staff in the county health department then follow the patient and confirm whether therapy has been administered and record the results. The success of the treatment program places much of the responsibility upon the family and patient. It is only through good health education and continuing supervision that these difficult hearing problems are resolved.

Summary

The State of Michigan has been actively involved in hearing conservation for over three decades. The present article summarizes the program of progressive evaluation of children by both audiometric and medical examinations. The total number of children screened and later diagnosed as having ear disease are tabulated on a statewide and county basis.

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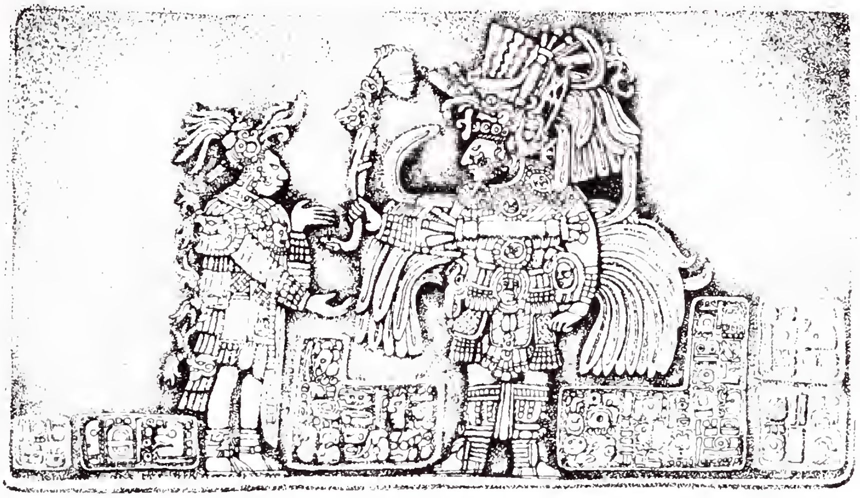

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Part-Time House Staff Training

By Marilyn Heins, MD
Jennifer Jacobs
Detroit

As I counsel medical students I am made increasingly aware that many students are concerned about the hours of residency training. They feel a 100 hour week is excessive and possibly dangerous to their patients. Students are worried about whether they have the physical and emotional stamina to survive such rigorous training schedules.

Students of both sexes who have or are planning families, are wondering about the effect long hours of training have on marriage or parenthood. Women students, on whom the burden of house management and child care traditionally rests, are especially concerned about whether they can satisfactorily fulfill the dual roles of physician-in-training and housewife-mother under the present conditions of most residency programs.

Several women students have told me they prefer internal medicine or family practice, but instead are entering psychiatry or anesthesia because the hours of training are less demanding.

It is postulated that additional students might choose primary care specialties, such as family practice, internal medicine, pediatrics or Ob/Gyn, if what are called "reduced schedule" residencies were available.[3]

In Michigan in 1975, NIRMP[4] results showed that 59.9% of first year positions were filled, compared to 71.2% of the national average. It is possible that increasing part-time training opportunities will be one factor to insure that a higher number of training spots are filled in Michigan.

In May of 1974, a questionnaire was sent to the program directors of all Michigan house staff training programs listed in the "Directory of Approved Internships & Residencies – 1973-74 edition" ("Green Book")[1]. The questions and responses were as follows:

Question 1: DO YOU BELIEVE IN THE PRINCIPLE OF PART-TIME INTERNSHIPS AND RESIDENCIES FOR THOSE DOCTORS WHOSE PERSONAL AND FAMILY COMMITMENTS MAKE IT DIFFICULT FOR THEM TO WORK FULL TIME?

Thirty four of the 65 program directors said "no," 24 said "yes" and seven did not answer.

Question 2: IS IT POSSIBLE TO ARRANGE FOR A PART-TIME INTERNSHIP AT YOUR HOSPITAL?

Forty-five said "no," 10 said "yes," and 10 did not answer.

Question 3: IS IT POSSIBLE TO ARRANGE FOR A PART-TIME RESIDENCY AT YOUR HOSPITAL?

Thirty-seven said "no," 19 said "yes," two said "maybe," and seven could not answer the question.

It should be noted that of the ones who responded, 24 out of 58, or 41% of all program directors in Michigan said they believed in the principle of part-time house staff training. However, of the 55 respondents who answered whether a part-time internship was available at their hospital, 45 out of 55, or 82%, said it was not possible to arrange such a program at their hospital. Thirty-seven out of 58, or 64%, said it was not possible to arrange for a part-time residency at their hospital. The questionnaire was sent out when the terms internship and residency were still in use.

About half of the medical students polled in Boston wanted part-time residency training opportunities. Yet only 15% of a national sample of medical directors said they would consider offering such a program.[2]

It has been clearly demonstrated[5] that potential dangers to patients exist as sleep deprivation causes impairments of house officers' performance.

Therefore, we recommend that Michigan hospitals consider the establishment of part-time training opportunities. One recommendation is that two people fill one position, each working three/quarter time, getting three/quarter credit, one/half pay, full fringe and full vacation.[3] There are other possible variations of reduced schedule residencies. It is hoped that Michigan hospitals will be innovative in discovering ways that young physicians receive optimal training without having to work the hours previously demanded.

Part-time residency opportunities are not readily available in Michigan at present. We recommend that such programs be established for the following reasons: 1) Part-time residencies could increase the number of matched slots in Michigan, 2) It is important that physicians have more time for themselves and their families, and 3) That the number of physicians entering primary care training could increase, and 4) Care of hospitalized patients should improve.

References:

1. *Directory of Approved Residencies, 1974-75,* American Medical Association.
2. Howell, Mary C., M.D., Ph.D., "Stop the Treadmill . . .We Want to Get Off." *The New Physician*, November, 1974, 27-30.
3. Broome, Claire V., and Shapiro, Eileen, "Memorandum Regarding the Importance of Reduced-Scheduled Residencies (35-60 hours/week) for Increasing the Number of Physicians Entering Primary Care Training," Harvard Medical School, April 1975.
4. *1975 Results, Number of Intern/Residents Sought and Numbers Matched for Each Participating Hospital,* National Intern and Resident Matching Program, March, 1975, 14-16.
5. Friedman, Richard C., M.D., et al. "The Intern and Sleep Loss." *New England Journal of Medicine,* July, 1971, 285:201-203.

Dr. Heins is associate dean of student affairs and associate professor of pediatrics at Wayne State University School of Medicine. Ms. Jacobs is a fourth year medical student at WSU.

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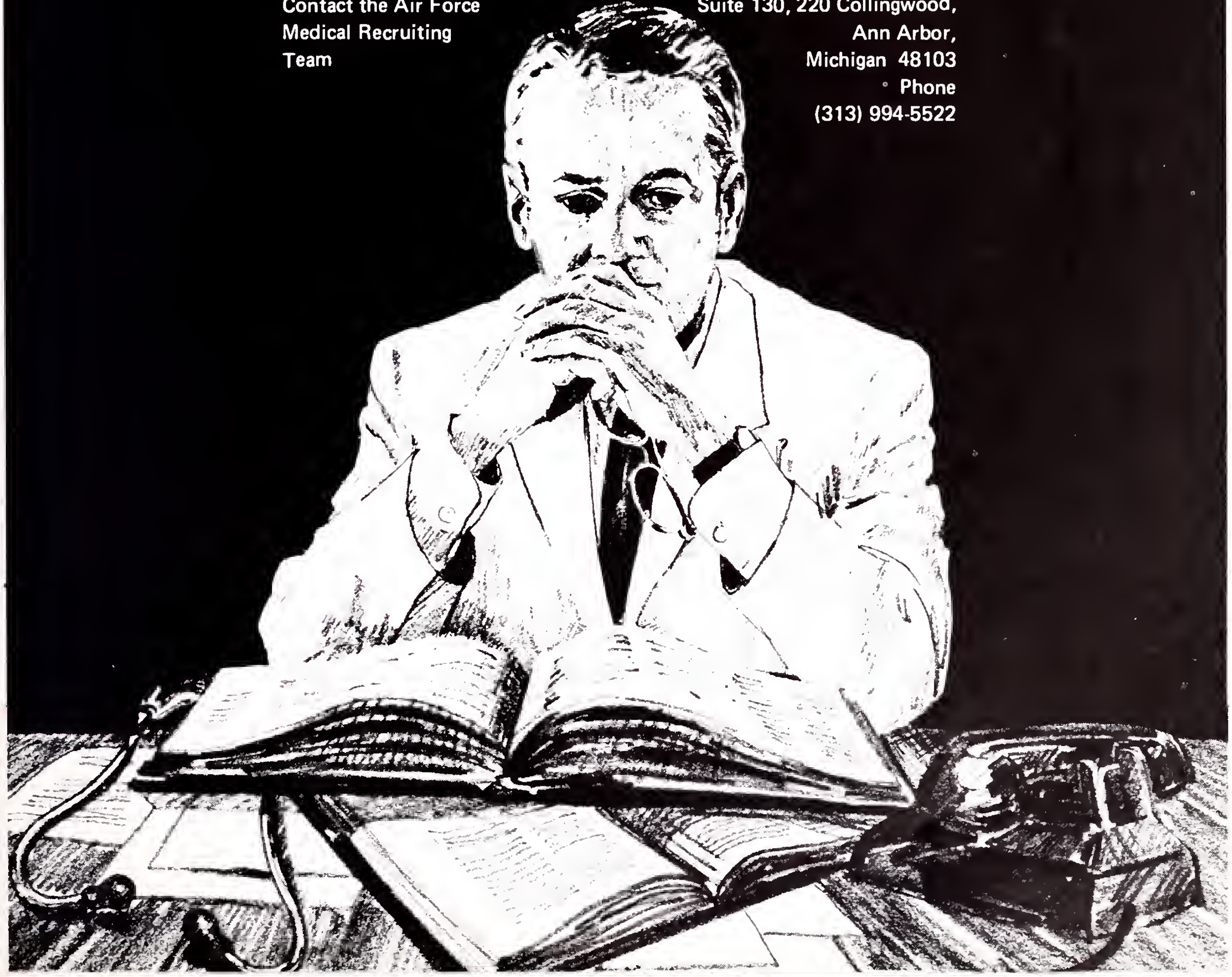

In Memoriam

Walter H. Boughner, MD
Algonac

Walter H. Boughner, MD, Algonac, who had been a family physician from 1930 until his retirement last December, died Aug. 22 at the age of 71. Doctor Boughner was graduated from Wayne State University School of Medicine and was affiliated with St. Joseph's Hospital, Mt. Clemens; River District Hospital, St. Clair; Port Huron and Mercy hospitals in Port Huron. He was a fellow of the American Academy of Family Physicians; past president of St. Clair County Medical Society and past president of the Bluewater Chapter, AAFP.

William G. Bennett, MD
Port Huron

Yale family physician for 18 years, William G. Bennett, MD, died Aug. 22 at the age of 57. Doctor Bennett was a member of the Michigan Academy of Family Physicians and was secretary-treasurer of the Blue Water Association of General Practitioners. He was affiliated with Yale Community Hospital and was a graduate of Wayne State University School of Medicine. Doctor Bennett was an avid horse racer and was secretary-treasurer of the Michigan Harness Horseman's Association.

Harvey Bodmer, MD
Kalamazoo

Long-time Kalamazoo physician Harvey Bodmer, MD, died July 3 at the age of 71. Doctor Bodmer was a past president of the Kalamazoo Academy of Medicine and was former chief of staff of Borgess Hospital. He was a graduate of Loyola School of Medicine. He was an obstetrician.

G. L. Caldwell, MD
Detroit

Detroit family physician from 1923 until his retirement in 1970, George L. Caldwell, MD, died Aug. 13 at the age of 86. Doctor Caldwell was a graduate of the University of Toronto and had been affiliated with St. Mary's Hospital of Detroit and the former St. Francis Hospital of Hamtramck.

Cecil Corley, MD
Jackson

Cecil Corley, MD, MSMS "Physician of the Year" in 1969, and former Jackson County Medical Society president, died Aug. 18 at the age of 82. Doctor Corley was president of the Jackson Union School Board for five years, and was credited with introducing clinical laboratory, oxygen

(Continued on page 680)

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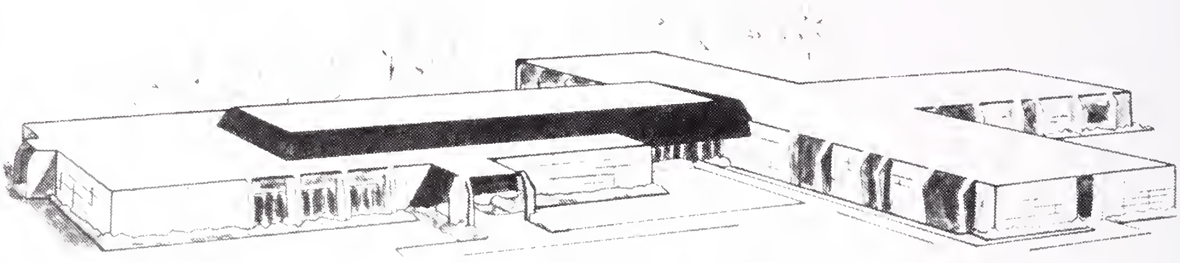

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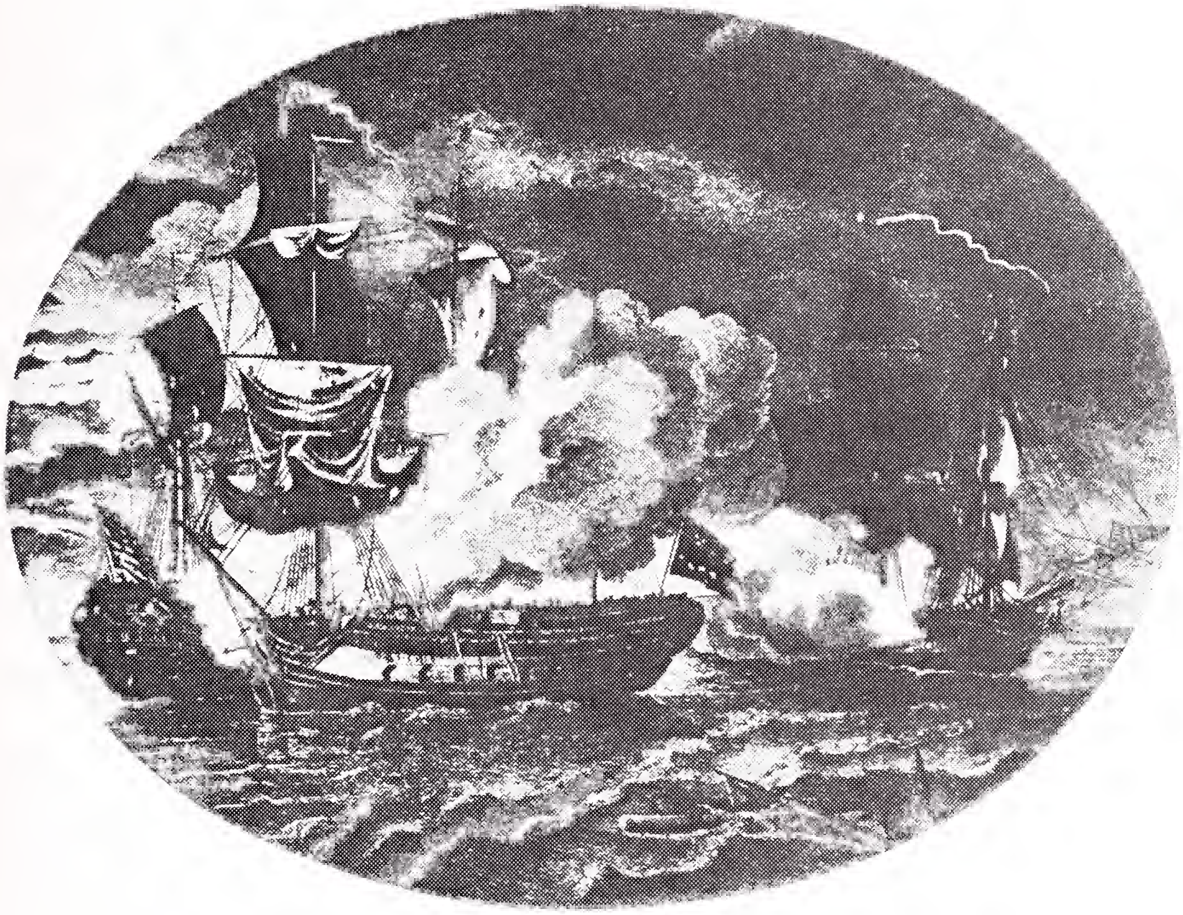

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tents and oxygen therapy to Jackson. He was an internist and fellow of the American College of Physicians. He had served on the state board of registration in medicine and belonged to the American Heart Association and American Society of Endocrinology.

Marion Franjac, MD
Farmington Hills

Marion J. Franjac, MD, former chief of staff at St. Mary's and Mt. Carmel hospitals of Detroit, died July 29 at the age of 71. Doctor Franjac was a graduate of Ohio State University school of medicine, and was a member of the American Academy of Family Physicians and Industrial Medical Association.

Howard A. Klein, MD
Grosse Pointe Shores

Former Harper Hospital Cardiology Chief Howard A. Klein, MD, died Sept. 5 at the age of 57. Doctor Klein also was affiliated with St. John Hospital. He was graduated from Wayne State University School of Medicine and was an associate professor of medicine at WSU. He was a member of a number of professional societies and fellow of the American College of Physicians, American College of Cardiology and the American College of Angiology.

William G. Mackersie, MD
Dearborn

The head of the anesthesiology department of Northwest Grace Hospital for 15 years, William G. Mackersie, died Aug. 5 at the age of 80.

Doctor Mackersie was a graduate of Toronto Medical School and had taught pharmacy at Wayne State University. He was past president of the Wayne County Society of Anesthesiologists and a member of the American Society of Anesthesiologists and the International Anesthesia Research organization. His late wife, Kathleen, was past president of the Woman's Auxiliary to the AMA.

John H. Savory, MD
East Jordan

East Jordan family physician for 28 years, John H. Savory, MD, died July 22 at the age of 58. Doctor Savory was a graduate of Washington University School of Medicine and past president of the Northern Michigan Counties Medical Society.

Vladimir Volk, MD
Saginaw

Vladimir K. Volk, MD, Saginaw County health commissioner for nearly 32 years, died Aug. 4 in the Soviet Union. He retired as medical director of the Saginaw Community Hospital in 1968 and was serving as a consultant to the Michigan Department of Public Health. Doctor Volk helped organize Michigan's first county health department in 1927 and had served five foreign assignments for the U.S. State Department and the U.S. Public Health Service. He had been honored by the American Public Health Association and the American School Health Association, was a member of 31 professional organizations, was an authority on communicable diseases, a statewide leader in work on problems of the aged.

Robert L. Watling, MD
Ypsilanti

Ford Motor Co. physician Robert Lett Watling, MD, died July 31. He was 37. Doctor Watling was a graduate of the University of Michigan Medical School and had served on the Ford Co's Community Relations Committee. He was president of the Michigan Industrial Medical Society.

Lynn F. Webber, MD
Grosse Pointe

Retired medical director of Oakwood Hospital, Lynn F. Webber, MD, died Aug. 1 at the age of 78. Doctor Webber was a former professor of medicine at Wayne State University and was a member of the American College of Chest Physicians.

Theophile W. Wienczewski, MD
Alpena

Retired Alpena physician Theophile W. Wienczewski, MD, died July 30 at the age of 67. Doctor Wienczewski was a graduate of Marquette University Medical School and was affiliated with Alpena General Hospital. He was a member of the American Academy of Family Physicians and past president of the Alpena Cancer Society. He also had been president of the Alpena County Medical Society.

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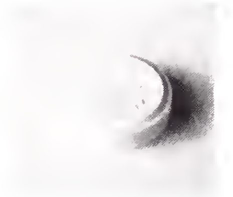

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Michigan Medicine Volume 74, Number 32, November 1975

The final group of articles in Michigan Medicine's *1975 series spotlighting the state's three medical schools appears on pages 687-696 of this issue. This time the school taking center stage is the Michigan State University College of Human Medicine. Included are a message and historical review by the dean, a student's view of her medical education at MSU, a thorough review of the clinical research underway at MSU and a progress report on the construction of the new MSU Clinical Sciences complex. Don't miss it*

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President's Page

State Fund Benefits All People; Let All Shoulder Its Burdens

This month's article is by Robert M. Leitch, MD, Battle Creek, MSMS president-elect. Dr. Leitch will assume MSMS office in April, 1976.

—Brock E. Brush, MD
MSMS President

Robert M. Leitch, MD
MSMS President-elect

All the taxpayers in Michigan, not just physicians, should be assessed if the State's Brown-McNeely medical malpractice fund ends with a loss over and above the fees it collects.

That idea is the point of the editorial by John G. Slevin, MD, in the October 9 issue of the *Detroit Medical News.* And his idea, I believe, is a good one. I think it deserves support.

As Doctor Slevin points out, the law establishing the fund states, "Such losses will be prorated among all insured MDs, including those covered by commercial carriers." Doctor Slevin thinks this is "grossly unfair." So do I.

Doctor Slevin says "hogwash" to those who argue that it is fair to assess doctors because all physicians need the services of the high-risk specialist (Class V doctors, of course, are heavily represented in the state fund, as they cannot get insurance through commercial carriers.) "It is the *people of Michigan* who need the services of the Class V specialist, not MDs," says Doctor Slevin.

"We maintain that the recipients of such services, the people of Michigan, through general taxation, should pay for any deficit in the fund," he continues. "If Class V specialists leave Michigan, it will be the people of Michigan who will suffer. So let them pay by their taxes if the fund loses money."

I think he's right. Such taxes probably could come from the state's general fund, thus creating no additional burdens on the people at the time of the temporary state fund's planned conclusion on June 30, 1977.

"All insured MDs" includes the young surgeon just starting in practice and facing large overhead expenses. It includes the older family physician who has reduced his practice and thus his income to a considerable degree. Is it fair to ask them to pay what the state can't?

The state fund has been a real help to Michigan residents, insuring new and high-risk physicians unable to get insurance elsewhere. It has thus allowed those doctors, so needed by the people, to serve the people. The consumers have been the beneficiaries.

So let's not now make it a burden to anyone.

A change in the law would remove future assessments from the shoulders of the state's 10,000 insured physicians and shift the assessments to the shoulders of the state's millions of taxpayers, who benefit from medical services.

MEETINGS

Nov. 11-13 – 1975 MSMS Annual Scientific Meeting, Michigan Inn, Southfield, contact: Helen Schulte, MSMS headquarters

Nov. 12 – All-day program, "Dying Children and their Families," sponsored by WSU Health Professions Continuing Education Council, at McGregor Memorial Conference Center, WSU, contact: Beaufort Cranford, Conference Coordinator, McGregor Center, WSU, Detroit, 48202

Nov. 12 – All-day program, "Health Care in the People's Republic of China," for health professionals, paramedics and students, at Scott Hall, WSU School of Medicine, contact: Marilyn Heins, MD, Associate Dean for Student Affairs, WSU Medical School, 540 E. Canfield, Detroit, 48201

Nov. 19 – PSRO Workshop, "Admissions Certification and Continued Stay Review — From Principles to Practice," sponsored by Michigan PSRO Support Center and MSMS Ad Hoc Committee on Peer Review Systems, at Metropolitan Airport Hotel, Detroit, contact: Herbert Mehler, project Director, Michigan PSRO Support Center, PO Box 950, 120 W. Saginaw St., East Lansing, 48823.

Nov. 20-22 – Postgraduate conference on plastic surgery for general surgeons, Towsley Center, University of Michigan Medical Center*

Nov. 21 — Graduate Seminar in Biochemistry, "Organization of Proteins in the Human Red Blood Cell Membrane," Room 2268, Scott Hall, WSU School of Medicine**

Nov. 22 – Postgraduate conference, "Common Genito-Urinary Problems in Family Practice," cosponsored by Michigan Academy of Family Physicians, Towsley Center, University of Michigan Medical Center*

Nov. 30-Dec. 5 – AMA Clinical Convention, Honolulu

Dec. 3 – Postgraduate course, "Cardiology for Family Physicians," cosponsored by Michigan Academy of Family Physicians, at Towsley Center, University of Michigan Medical Center*

Dec. 5 – Graduate Seminar in Biochemistry, "Dietary Carbohydrates: Good, Bad or Indifferent?" Room 2268 Scott Hall, WSU School of Medicine**

Dec. 5-6 – 23rd Annual Symposium on Trauma, Harper Hospital, Detroit, contact: Joseph L. Posch, MD, Chairman, 1408 Kales Building, Detroit, 48226.

Dec. 12 – Graduate seminar in biochemistry, "Magnetic Resonance Studies of the Mechanism of the DNA Polymerase Reaction," Room 2268, Scott Hall, WSU School of Medicine**

Dec. 17 – The Council, MSMS headquarters, contact: Warren Tryloff, director.

Dec. 31 – December Seminar, Michigan Society of Pathology at U-M, contact: Robert Hendrix, MD, Department of Pathology, U-M, Ann Arbor 48104

Jan. 13-15 – Postgraduate course, "Electrocardiographic Diagnosis," for family physicians and internists, Towsley Center, University of Michigan Medical Center*

Jan. 19-23 — Family Practice Review I, cosponsored by Michigan Academy of Family Physicians, at Towsley Center, University of Michigan Medical Center*

Jan. 21 — MSMS Council, MSMS headquarters, contact: Warren F. Tryloff, director

Jan. 26-30 – Family Practice Review II, cosponsored by Michigan Academy of Family Physicians, at Towsley Center, University of Michigan Medical Center*

Feb. 10-17 – Medical Specialty Review Seminar, Snowmass-at-Aspen, sponsored by Leonard Wolin, MD, contact: Doctor Wolin, 2216 Medford Road, Ann Arbor, 48104

Feb. 14 – February Seminar, Michigan Society of Pathologists, Henry Ford Hospital, contact: Jacob E. Briski, MD, Department of Pathology, St. John Hospital, Detroit, 48236

Feb. 23-27 – Postgraduate course, "Emergency Medicine," cosponsored by the American College of Emergency Physicians, at Towsley Center, University of Michigan Medical Center*

March 3-4 – Postgraduate course, "Advances in Pediatrics," cosponsored by the Michigan chapter, American Association of Pediatricians, at Towsley Center, University of Michigan Medical Center*

March 15-16 – Postgraduate course, "Oncology for the Practicing Surgeon," at Towsley Center, University of Michigan Medical Center*

March 23-25 – 15th Annual Michigan Conference on Maternal and Perinatal Health, at Kalamazoo Center Inn, Kalamazoo, contact: Helen Schulte, MSMS headquarters

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**Contact: Robert K. Richards, director, Office of Intramural Education, Room 6-1109, Towsley Center for Continuing Medical Education, University of Michigan Medical Center, Ann Arbor, 48104.*

***Contact: Donald R. Burkholder, PhD, University Relations, WSU School of Medicine, 540 N. Canfield, Detroit, 48201.*

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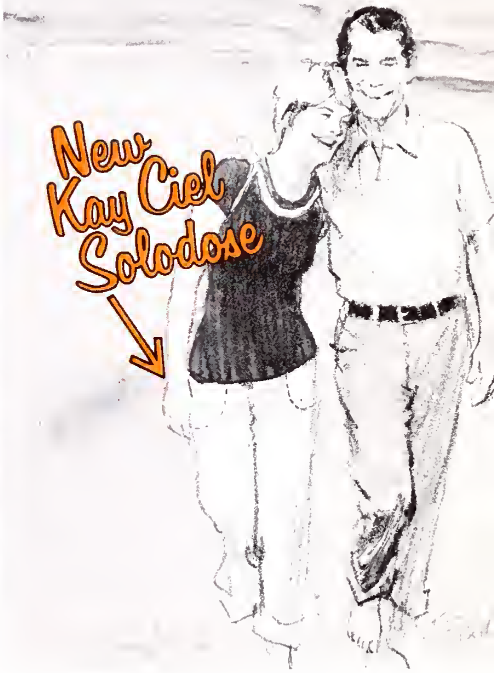
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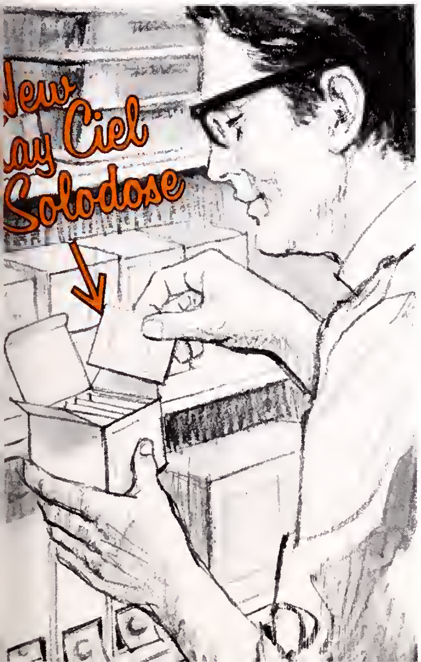
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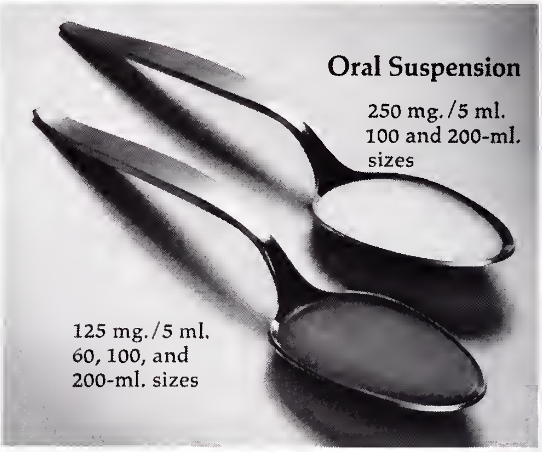

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Medicine at Michigan State University: The College of Human Medicine at 11 Years

By Andrew D. Hunt, MD, Dean
MSU College of Human Medicine

With a strong mandate for integration with other programs and colleges at Michigan State University and for utilizing existing basic science departments as a foundation for the new program, the College of Human Medicine was established in July of 1964 as a two-year medical school.

Beginning with a two-year program provided a rich and greatly appreciated opportunity to modify sharply the first two years of medical education — where very little had been done in the past and where it appeared that much needed doing if major changes in attributes and career choices of physicians were to occur.

The best predictions for Michigan State University in 1964 indicated a legislative mandate for a full four-year school was at least five years away. Thus we were presented a major opportunity to concentrate on generating a curriculum for the first two years of medicine which would recognize that:

- *Understanding of human behavior as well as biological science is basic to medicine;*
- *Medicine is basically a helping profession rather than an applied science, and deals with professionalization of students specifically rather than leaving it to chance;*
- *Physicians characteristically must be self-motivators and self-learners if they are to avoid obsolescence; therefore, medical education must be characterized by students assuming considerable responsibility for their own learning rather than being at the receiving end of faculty-generated information overload;*
- *The basic "science" of medicine is understanding of the human being or "human biology" and that human biology is a complex synthesis of biological, behavioral, and social information. Furthermore, perhaps the most effective way to learn human biology is in the context of human development, since one can best understand the present in terms of past events, and*
- *Most health care takes place in communities and institutions; and therefore, that clinical learning should be located as much as possible in community hospitals. Indeed, preparation for a four-year program should include training in a community setting as a basic educational goal.*

To help insure achievement of these goals, administrative actions covered five major areas:

Inclusion of the Behavioral Science Departments of anthropology, sociology, and psychology, as well as the departments of anatomy, biochemistry, microbiology, physiology, pathology, pharmacology, biophysics and zoology, to be administered jointly by human medicine as well as by other colleges; namely, veterinary medicine and natural science. While strategies for effective involvement of the behavioral sciences in educational programs have been a constant source of faculty endeavor, there has never been any question as to the basic nature of these disciplines.

The Issue of Professionalization was addressed in 1970 by establishment of a "doctor-patient relationship" course, utilizing a technique developed by Norman Kagan, PhD, and others in the college of education, utilizing closed circuit television and programmed models, a report of which has been recently published by Schneider and Werner.[1]

This sequence establishes the importance of the interview and the relationships between the physician and patient as basic to the helping process, and as a transaction of significance independent of the illness or disease of the patient.

In Terms of the Self-Learning Aspects of the program, it was decided that a major investment should be made in self-instructional media. More recently, a mode possibly unique to our institu-

Dean Hunt

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[1] Arnold Werner, MD, and John M. Schneider, PhD, "Teaching Medical Students Interactional Skills, a Research-Based Course in the Doctor-Patient Relationship," NEW ENGLAND JOURNAL OF MEDICINE, May 1974.

An aerial view of Michigan State University's medical campus shows the two wings of the Life Sciences Building in the foreground, and the Clinical Sciences complex (three units), now in final stages of construction. In the background, Fee Halls (circled) house classrooms, faculty offices and several departments administered by the College of Human Medicine.

tion, called "Focal Problems," has emerged. Small groups of students, with faculty serving more as preceptors and resource people than as "teachers," are presented with typical medical problems such as headache, abdominal pain, jaundice, and the like. Learning resources such as film clips, videotapes, and annotated bibliographies, are made available for student use. Over a period of one, two, or three weeks the students seek out and learn to apply problem-solving mechanisms, and at the same time learn much basic scientific and clinical information.

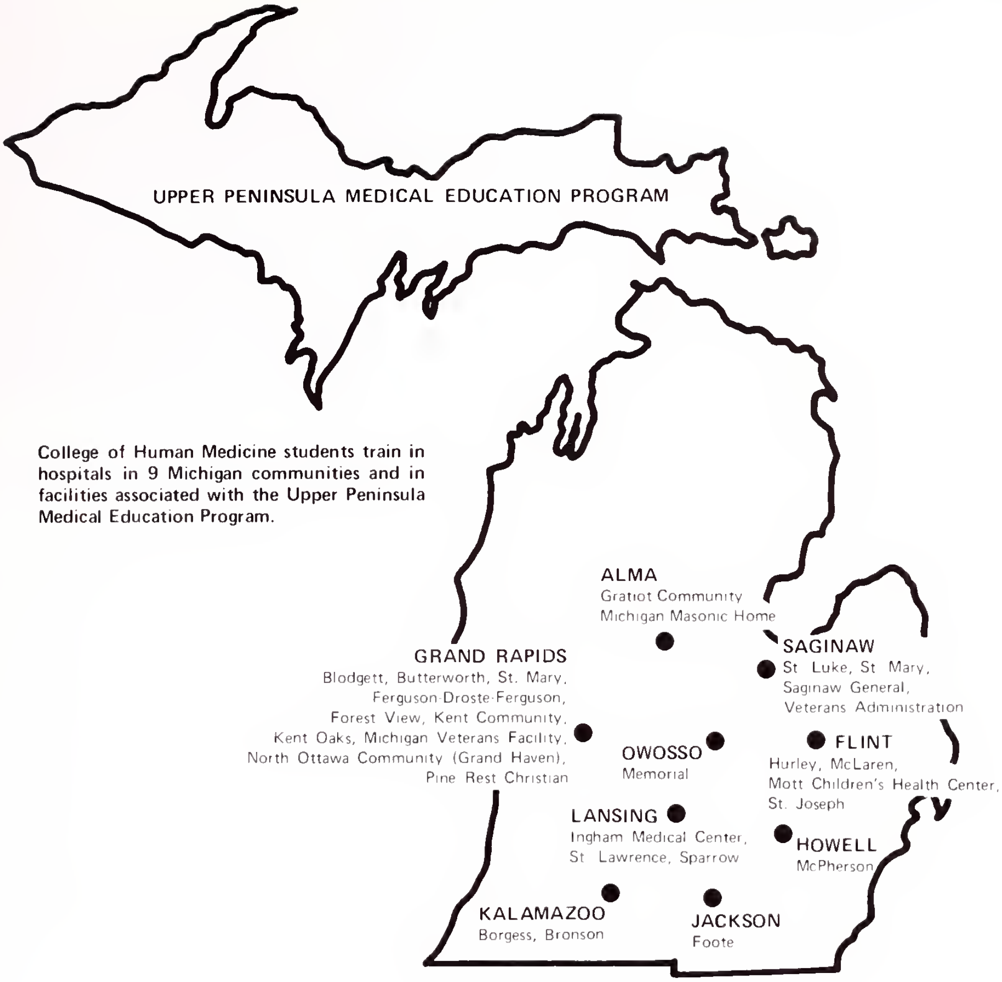
For Teaching and Research in Human Development in the two-year program, a department called Human Development, with pediatrics as its clinical arm, was established, and has emerged as an interdisciplinary group of individuals basically interested in the developmental process. In the two-year program this department shared the course in human biology with the department of medicine, and, a little later, with psychiatry. The human development course itself, while still present, is now part of the focal problem approach, as the major interdepartmental college effort in the four-year program has developed.

The Community Base for Education was recognized early as highly important, not only because it is desirable for medical training to take place in community settings but also as a natural consequence of the assumption that behavioral sciences are basic to medicine. This assumption led to the recognition that the laboratory for behavioral science is community-based. Thus, about one and a half years after the founding of the college, an assistant dean for community affairs was recruited. His initial function was to develop a "community laboratory" for pre-clinical student medical learning and research.

In addition, for early clinical training, we let it be known to hospitals throughout the state that we were interested in educational arrangements. The hospitals with which we are currently associated in Saginaw, Flint, Lansing, Grand Rapids, and Kalamazoo, even in the earliest days indicated an interest in working with us. Experiences that occurred in 1966, 1967, and 1968 were vital in the ultimate decision-making for distributed clinical education arrangements which have characterized our later development.

Finally, the very nature of the development of this medical school essentially demanded that it become a site for research in medical education, and that an organization for research in medical education would ensure continued innovation and educational development. Thus, with the help of the Commonwealth Fund, an Office of Medical Education Research and Development was founded in 1966, and Hilliard Jason, MD, Ed D, was recruited from Rochester to head this department. It has become one of the most important of its kind in the United States. (Last year Doctor Jason was named director of faculty development for the American Association of Medical Colleges.)

The curriculum which has emerged for the first two years of medical education at MSU is actually a kind of compromise. The students are required to take both fairly traditional courses in the basic sciences, and the interdisciplinary college-wide courses described above. For the past three years it has been possible for students to opt for a "Track II" program in which all traditional courses may be waived and learning takes place in the focal problem mode. Currently, then, students after the first term of their first year have a choice of two programs; one more traditional and conservative


UPPER PENINSULA MEDICAL EDUCATION PROGRAM
ALMA
Gratiot Community
Michigan Masonic Home
SAGINAW
St Luke, St Mary,
Saginaw General,
Veterans Administration
GRAND RAPIDS
Blodgett, Butterworth, St. Mary,
Ferguson-Droste-Ferguson,
Forest View, Kent Community,
Kent Oaks, Michigan Veterans Facility,
North Ottawa Community (Grand Haven),
Pine Rest Christian
OWOSSO
Memorial
FLINT
Hurley, McLaren,
Mott Children's Health Center,
St. Joseph
LANSING
Ingham Medical Center,
St Lawrence, Sparrow
HOWELL
McPherson
KALAMAZOO
Borgess, Bronson
JACKSON
Foote

College of Human Medicine students train in hospitals in 9 Michigan communities and in facilities associated with the Upper Peninsula Medical Education Program.

than the other. It is hoped that longitudinal studies will elucidate outcomes of these two tracks, which should be of national signficance if properly done.

Vital Role of Basic Sciences

It is our strong feeling that the basic sciences must be supported, not only for their own sake, but because the major success of the health care industry depends upon their continued productivity. Thus, the degree to which we support the basic sciences at Michigan State is not measured merely by the number of hours of contact with our students, nor by credit hours produced in departmental offerings.

Furthermore, it seems likely that the coming wave of basic science teaching in medicine will be concerned far more with teaching during the clinical years, at the graduate level, and in continuing education in practicing physicians, than in the current, almost exclusive involvement in the first two years of undergraduate medical education.

Becoming a Four-Year School

Originally, the plan for becoming a four-year medical school consisted of:

- *Building a university hospital of 300 to 400 beds on the campus to establish a model of academic patient care for students, a base for clinical research and referral practice with close proximity to the basic sciences of medicine, and a site for graduate and continuing medical education, and*
- *A distributed group of hospitals in multiple communities where the great majority of basic clinical training of medical students would occur.*

During the formative years of the College of Human Medicine as a two-year school, the faculty established an experience called, at first, the "Primary Clerkship," now the "Fundamentals of Patient Care."

Now provided in hospitals not only in Lansing, but also in Saginaw, Flint, Grand Rapids, Kalamazoo and the two smaller communities of Howell and Alma, "Fundamentals of Patient Care" at the end of the second year enables students to become acculturated to the hospital, learn to deal with their anxieties in meeting and managing sick people, and perfect their techniques of history-taking and physical diagnosis. The experience helps them to perform in the typical hospital-based clerkships in the medical specialties and family practice.

During four consecutive academic years, then, the faculty became increasingly adept at working with these institutions and community-based physicians, and felt increasingly comfortable. So that, given sufficient funding, a full clinical medical education program could be developed in these hospitals with or without the presence of the campus-based university hospital.

Although planning for a university hospital was constant during this early period, the 1968 election, and the policies announced by the administration in 1969 concerning the inflationary nature of hospital construction essentially laid to rest any hopes that such a hospital could be publicly funded in the foreseeable future.

First MD Degree in 1972

Coincident with disintegrating prospects for hospital construction, there was a sharp upturn in the spring of 1969 of the political likelihood of a four-year medical school mandate from the Michigan Legislature, and funding for the four-year school occurred in 1970. Two years later MSU conferred its first doctor of medicine degree.

Students were dispersed to each of four communities; Lansing, Saginaw, Flint, and Grand Rapids, at the end of the second year. Kalamazoo was added in September 1974. In each community, hospitals have formed an educational corporation for undergraduate medical education, with an assistant dean and coordinators in the major specialties. In Grand Rapids and Kalamazoo the University of Michigan is a collaborating element of each corporation.

Of critical importance in assuring the maintenance of uniform educational standards in multiple hospitals and locations is evaluation of student performance, with careful setting of learning objectives and uniform standards across the board. This is the object of intensive institutional effort. It is a very difficult task and the source of much dispute among both full-time and voluntary faculty.

The success of the entire program is heavily dependent upon the physicians in the state, numbering about one thousand, who have become members of our voluntary faculty, and who are actively involved with us in teaching, evaluation, and providing role models of great significance. It is a pleasure publicly to thank them and express great admiration for their selflessness in participating in this endeavor.

Likewise, the cooperation of hospital boards of trustees, administrators, professional staff, and house staffs, is extraordinary, and has become a national model for others who aspire to using community hospitals for undergraduate medical education.

U P Medical Education Program

Five years ago W. Donald Weston, MD, and James B. Thomas, MD, wrote a monograph entitled "Community-Based Medical Education, An Integrated Modular System of Health Care and Education." They postulated the possibility that medical education could occur in a modular setting, well away from a medical school or university, given appropriate supports and input from parent institutions, and that such arrangements would effectively serve areas of need by training health professionals more specifically and appropriately than is now possible.

This paper led to the decision of the federal and State of Michigan governments to give this idea a try in the Upper Peninsula. After two years of preparation and planning, 10 students whose intentions to practice medicine in the UP seemed firm, have enlisted in the program. After their first term on the East Lansing campus in the fall of 1974, they have been based in Escanaba, where Paul Werner, MD, a recent graduate of MSU, is their major preceptor. With family practice and ambulatory care as their fundamental clinical orientation, and with basic science inputs from MSU as well as Michigan Tech and Northern Michigan University, the program has every chance of being a successful effort to help with the serious problems of geographic distribution of physicians. Program director is Ronald Richards, PhD, formerly Director of the Office of Medical Education Research and Development in the College of Human Medicine.

Finally, I wish to reiterate our appreciation for the enthusiastic and helpful support of the Michigan State Medical Society over the years, without which it is doubtful that we could have been successful.

We have been through an era of generous support to higher education in general and medical education in particular. The current economic situation and public attitudes are seriously and adversely affecting us today. While today's belt-tightening and emphasis on efficiency could be useful and stimulate needed improved management practices, the danger is that further funding cuts could lead to dangerous compromises with quality.

It is a responsibility for all of us to work for public and governmental understanding of the vital importance to society of a healthy and well-funded system of higher education, of which education in the health professions is a significant part.

The new Clinical Sciences building, MSU.

MSU Builds Its First Patient-Care Facility

Innovation characterizes the Clinical Sciences complex under construction at Michigan State University.

The project is comprised of three separate units — a four-story office and laboratory wing, a two-story building for laboratory animal resources, and a two-story ambulatory patient care facility. Their combined areas total some 225,000 square feet.

Work is nearly 80 percent complete on the $18.1 million center for training MDs, DOs, nurses and other health professionals. Medical education programs and the patient services provided in conjunction with them, will be provided by Michigan State University's two medical schools — the College of Human Medicine and the College of Osteopathic Medicine.

The MSU Clinical Sciences complex is the nation's first university-owned health care facility jointly administered by allopathic and osteopathic medical colleges. (Michigan State University is the world's only institution supporting both types of medical schools.)

Health professions students at MSU include approximately 400 medical students, nearly 300 osteopathic students, some 325 nursing students and several hundred enrolled in health related studies.

From the vantage point of a facility dedicated to providing the best of ambulatory health care, the clinical sciences complex will provide opportunities for health professions students, in collaboration with other affiliated health care institutions, to participate in and learn principles of extended ambulatory care in relation to total, comprehensive care — primary, secondary and tertiary.

Medical students, along with nursing and other health professions students, will be able to follow progress of patients receiving continuity of health care in these areas of comprehensive care. Opportunities will abound for examining different modes of education in different settings for patient care, including the physician's classical or traditional office arrangement, group practice and interdisciplinary health team delivery (IHTD).

Programatically, health care opportunities will include health surveillance to screen patients to find unknown or unnoticed health problems, and health maintenance services utilizing the multidisciplinary approach for known and chronic problems. Special diagnostic capabilities will come from a wide variety of resources, including neurological, cardiopulmonary, and radiologic services. In providing outpatient surgical care, evaluation will be made of new possibilities for carrying out surgery on an ambulatory basis.

Central to the different modes of patient care will be four self-contained clinic modules, each with 10 examining rooms, eight consulting physician offices, two treatment rooms, two nursing centers, a conference room, study carrels, office for staff physicians, rest rooms and two separate waiting areas for patients.

The modules are patient oriented. Whenever possible, patients will receive care in their assigned modules. Consulting physicians will come to the patient modules, prescriptions from the clinic pharmacy will be delivered there, and appropriate clinical tests will begin there (to be completed in the building's clinical laboratories).

Planning for the clinic, intended to become a model of ambulatory care, is stressing the highest priorities for quality assurance, measurement of patient satisfaction, interdisciplinary collaboration, and cooperative arrangements among the many contributing health professionals and institutions.

The Nature of Interdisciplinary Research at Michigan State University

By Charles C. Sweeley, PhD
George F. Sargent, PhD
East Lansing

Interdepartmental cooperation and collaboration are the norm, not the exception, at Michigan State University.

Interdepartmental cooperation and cooperation between university and community are instrumental in effective faculty response to the program requirements of many of today's health related funding sources. National interest has been exhibited in multidisciplinary approaches to such broad problem areas as cancer, cardiovascular disease, genetic diseases, mental health, and health care delivery.

But traditional medical schools experience difficulties with organizing research around targeted program areas, rather than departmental disciplines, because health-related research cannot be contained easily within individual disciplines. Consequently, centers and institutes have been developed at many medical schools to facilitate multidisciplinary research.

A major strength at Michigan State University has been the ease enjoyed by the faculty in forming problem-oriented interest groups comprised of members from several departments or colleges. This strength is one result of cooperation between the autonomous colleges of human medicine, osteopathic medicine and veterinary medicine, and the basic, biological and behavioral science departments.

In addition, one phase of the College of Human Medicine curriculum is focal problem oriented, necessitating that faculty from several departments share teaching responsibilities within a single course, and thus encouraging transdepartmental communications. A final factor is the availability of problem-oriented research space on a "needs" basis.

It should be noted that not all medical research at MSU falls into the multidisciplinary structure. In 1974, outside funding of other individual research projects in the College of Human Medicine totalled $3.7 million, with some $2 million more covering multidisciplinary programs.

Highlights of MSU medical research of particular interest to *Michigan Medicine* readers include studies conducted by two multidisciplinary units — the Office of Health Services Education and Research (OHSER) and the Office of Medical Education Research and Development (OMERAD) — and projects underway in three broad program areas of cancer, immunology, and cardiovascular disease. OHSER and OMERAD perform a major portion of the medically related behavioral research at MSU.

Work by Walter J. Esselman, PhD, standing, and Harold C. Miller, PhD, on regulation of immunological processes may lead to early development of methods to facilitate surgeons' efforts to block or suppress graft rejection responses.

Office of Health Services/ Education and Research (OHSER)

Organized with the College of Human Medicine as a focus for community medicine and for health services education and research, OHSER activities are centered around the ecology of health and illness and how comprehensive services can be best organized, delivered, and evaluated. OHSER director is Sidney Katz, MD. Associate director is Joseph A. Papsidero, PhD.

Doctor Sweeley is assistant dean for research, MSU College of Human Medicine, and Doctor Sargent is assistant to the dean for research.

Working closely with the medical school's clinical departments, OHSER responsibilities include such areas as epidemiology, preventive medicine, environmental medicine, health education, consumer education, public health, comprehensive health care, health services organization, health services delivery, health services planning and evaluation, health-related policy analysis, economics of health care, and health services technology.

As an example of its research scope and capability, OHSER is evaluating effectiveness of a team of professionals and health assistants in providing home health services to old people who are chronically ill. Based on a rigorous experimental design, the study is underway in five sites in various parts of Michigan.

In another project, OHSER is helping to introduce data collection procedures into family practice centers in Michigan to study and demonstrate uses of minimum ambulatory care data sets. Involved are uses of such data in quality assessment, services program management and evaluation and epidemiological analysis.

Much of OHSER research is multidisciplinary and consequently, collaborative in nature. In its various projects, OHSER is collaborating with the MSU College of Osteopathic Medicine, the Michigan State Department of Health, and local departments of Health; the MSU Cooperative Extension Service, Michigan Department of Social Services, and Genesee County.

OHSER calls on many disciplines and MSU resources via joint faculty appointments and project-related arrangements. Community groups and agencies also are collaborators. To achieve effective research, OHSER brings together community groups or agencies with appropriate MSU faculty and the necessary external resources. After determining a community's readiness to participate, OHSER helps to facilitate cooperative relationships, develop and plan programmatic approaches, and implement sound design and assessment procedures.

Guiding OHSER's efforts is the principle that community improvements should be developed according to special needs of the community with full recognition of resources available or potentially available within the community. Thus, OHSER strives to implement high quality, community oriented research based on the special needs and resources of the local communities.

Office of Medical Education/Research and Development (OMERAD)

One of the first units created in the College of Human Medicine, OMERAD also was among the earliest medical education and research and development offices on the national scene to bring together a professional staff with backgrounds in educational psychology, evaluation and measurement programmed instruction, media, instructional development, computers, psychology, medicine, sociology, and educational administration. OMERAD director is Arthur S. Elstein, PhD, who is on sabbatical. Acting director is Ann G. Olmsted, PhD.

OMERAD activities span research, development, service, instruction and evaluation to meet the need to assess and evaluate the impact of the medical school's innovative programs on MD graduates of Michigan State University. Many of OMERAD's activities are facilitating in nature, with results reflected in achieving medical college goals in cooperation with the faculty, the administration, and other offices.

Three of the earliest projects included research on interpersonal skills, the medical inquiry process, and a longitudinal study of the professional socialization of medical students.

The interpersonal skills project has led to, among other accomplishments, devlopment of a unique and rewarding course — "The Doctor-Patient Relationship." This course affords students numerous opportunities to practice and evaluate their interpersonal skills in relating to real and simulated patients through video-taped interviews of themselves and fellow students.

The study of the medical inquiry process seeks to identify the problem-solving processes used by expert diagnosticians. Goals of the project are: characterization of the strategies of diagnostic reasoning, development of a model of medical decision-making, and assessment of assets of high fidelity simulation as a research methodology. Computer simulations are used to implement the models of diagnostic reasoning, subsequent medical decision-making, and patient response. These simulations and supporting instructional materials assist medical students in developing problem-solving skills.

The longitudinal study of professional socialization of medical students began with the first two-year class (1966) admitted to the College of Human Medicine. Because rapidly changing methods of health care delivery require the individual professional to be highly adaptive, it has become essential to understand the process by which adaptive attitudes and qualities may be acquired.

More recently, four major research projects have been undertaken: the admissions process, information systems, simulation, and criterion-referenced testing.

Several goals of the medical school are closely related to its admissions procedures: admitting students of high ability, admitting a greater variety of persons than is typical, and admitting students who will become the kind of physicians needed in Michigan, the socially responsible primary care physician. The admissions project seeks to produce quantifiable criteria that are logically consistent with the philosophy of the College of Human Medicine curriculum.

As the amount and complexity of information gathered about the medical students increases, the management and retrieval of the information becomes more difficult. The information systems project is concerned with the design and development of a pilot system for processing student information in ways useful for evaluation and instructional development.

A pre-emptive goal of MSU's medical schools is to "create an academic milieu in which the teaching program, teaching methods and institutional goals are under constant re-examination and assessment . . ." The simulation project compares various teaching techniques (lectures, seminars, simulations, etc.) on measures of comprehension and retention of material by students. Additionally, the simulations (i.e., patient games) are also being tested for cost-effectiveness and usefulness in a variety of instructional settings.

Research also is underway which will lead to the development of a prototype criterion-referenced national board examination. The project will include study of the process of development of the prototype as a model for the development of certification examinations generally.

Program Centered Research

Intensive program research is underway at Michigan State University in the areas of cancer, immunology, and cardiovascular disease.

Cancer

Cancer research in the medical school involves many different disciplines and is focused on cancer prevention, early detection, and therapy. Basic and applied investigations involve every operational level of research, including molecular genetics, biochemical, physiological and immunological studies, and experiments at the level of the whole organism. Included in these programs are evaluations of physical, chemical and viral-induced carcinogenesis.

At the genetic level, James Trosko, PhD, and Chia-Cheng Chang, PhD, are testing the mutation theory of cancer. The question in their research is whether humans who are exposed to ultraviolet light or chemical carcinogens have a genetic predisposition to cancer.

At the biochemical level, Jay Goodman, PhD, is interested in the elucidation of the initial metabolic events that lead ultimately to neoplasia. Currently he is studying the ability of isolated rat liver cells to recover from carcinogen-induced DNA damage (DNA repair mechanisms) in the hope of discovering why aberrant gene expression becomes increasingly likely in some situations. The work of Fritz Rottman, PhD, is similar in a sense, as he is interested in the possible role of messenger RNA in regulation of genetic expression. A particular recent finding of enhanced stability in the cell of RNA containing methylated nucleosides. coupled with the discovery of such RNA molecules in Novikoff hepatoma cells, suggest that these substances may be significant in the molecular events leading to neoplasia.

At the physiological level, Clifford Welsch, PhD, and Joseph Meites, PhD, are interested in the hypothalamic regulation of anterior pituitary hormones and the role of these functions in mammary growth, lactation and mammary tumor development. Doctor Welsch also has work in progress on the evaluation of the prophylactic and chemotherapeutic potential of several ergot alkaloids in the control of murine mammary carcinoma.

Marek's disease is a malignant lymphoma in chickens. A broad base of research is underway on this disease in collaboration with Richard Witter, PhD, and his associates at the U.S. Department of Agriculture's Regional Poultry Laboratory on campus, where the first vaccine against Marek's disease was developed. At the biochemical level, John Boezi, PhD, is comparing protein synthesis in cultured chicken cells before and after they have been infected with the herpes virus that causes Marek's disease. Leland Velicer, PhD, is isolating an antigenic glycoprotein from cells infected with Marek's disease herpes virus; this membrane antigen might induce cellular immunity and hence might play a role in preventing cancer cells from multiplying.

Since macrophages play an important role in the control of neoplasia, increasing emphasis is being made of the use of immunotherapy as a regimen to combat human cancers. Before macrophages can be used against tumor cells, however, more information must be obtained about macrophage function in the host's response to a tumor. Tobi Jones, PhD, is measuring macrophage cytotoxicity toward tumor cells during syngeneic growth, and uses this tool to determine how different lymphocyte populations and perhaps their products induce macrophage cytotoxicity.

Immunology

In other research on the regulation of immunological processes, Walter Esselman, PhD, and

Harold Miller, PhD, have made the important discovery that gangliosides on the surface of thymus-derived lymphocytes (T cells) are involved somehow in the sequence of lymphocyte membrane-antigen reactions that ultimately leads to maturation of the bursus-derived lymphocytes (B cells) and production of immunoglobulins. Their research may lead to the early development of methods to facilitate surgeons' efforts to block or suppress graft rejection responses.

Typical of multidisciplinary research groups that are forming around specific areas of interest is the immunology group that embraces investigators of the medical college and of departments in other colleges as well. For the past four years this group of faculty, graduate students, postdoctoral fellows, medical students and technicians have met every other week in the evening to discuss topics of mutual interest in basic and clinical immunology. The format of these sessions varies from having inside speakers presenting their own research, results and problems, to invitations to outside guests as seminar speakers. Current research within the immunology group encompasses cancer, inflammation, autoimmune diseases, aging and transplantation.

Cardiovascular Disease

A research center in cardiovascular diseases already exists in the College of Human Medicine at Michigan State University even though it is not formally designated as such. Studies on the mechanism of hypertension at the blood vessel level are being pursued in a broad-based program.

Recent work indicates that the sodium-potassium pump in the vascular smooth muscle cell is electrogenic, i.e., increased speed of pumping hyperpolarizes the cell membrane while decreased speed depolarizes the membrane (Francis J. Haddy, PhD, Jerry B. Scott, PhD, Donald K. Anderson, PhD). Other studies indicate that the pump speed in the vascular smooth muscle of both arteries and veins is suppressed in experimental renal hypertension (Henry W. Overbeck, M.B. Pamnani, PhD and Doctor Haddy). This raises the possibility that the blood vessels constrict in part because something suppresses the electrogenic pump in the vascular smooth muscle cells, thereby depolarizing the membrane. Efforts are currently being directed at the activity of sodium-potassium ATPase in the cell membrane (David L. Clough, PhD).

It has long been known that the arteries of the hypertensive individual are "waterlogged," i.e., contain excess water and sodium. This has been attributed to hypertension rather than the other way around, but recent studies by Drs. Overbeck, Pamnani and Geza Simon, MD, suggest that the "waterlogging" may in fact be causal. It is now believed that hypertension may result from this condition by increasing the resistance to flow through arterioles and by reducing venous compliance, which in turn increases cardiac output. Efforts are now being made by this group to determine whether the "waterlogging" effect is related to suppression of the sodium-potassium pump.

Studies on effects of estrogen on early development, conducted by Arthur F. Kohrman, MD, (left) principal investigator, and Donald B. Kaufman, MD, may determine the possible role of DES in vaginal cancer in offspring of women treated with DES during early pregnancy. Their work is supported by the National Cancer Institute.

Emphasis is also being given to the mechanisms of shock, particularly the roles of blood volume and the central nervous system. It is frequently stated that irreversibility is in part related to transcapillary fluid efflux, resulting from increased capillary hydrostatic pressure subsequent to arteriolar dilation and maintained venous constriction. Gravimetric techniques indicate that in canine hemorrhagic and endotoxin shock, fluid influx continues in skin and skeletal muscle as long as blood pressure is low (Drs. George J. Grega, PhD, James Schwinghammer, PhD and Francis J. Haddy, PhD).

Other studies on endotoxin indicate that it may act in part through the central nervous system, especially in the prolonged maintenance of hypotension once it is established.

Studies on the mechanism of action of digitalis on the heart are directed toward the design of more effective cardiotonic agents and discovery of drugs that combat the life-threatening side effects of digitalis (Drs. Tai Akera, MD, PhD, and T.M. Brody, PhD).

The role of the renin-augiotensin system in development of hypertension is being investigated by A.M. Michelakis, MD, PhD, in isolated kidney cell cultures. The relationship of renal prostaglandins to spontaneous and experimentally induced hypertension is being studied by David A. Reinke, PhD.

One Insider's View

Training For Tomorrow's Medicine

By Jeanne McKibben
East Lansing

Medical student Jeanne McKibben, community physician Roderick R. Abbott, MD, who is an MSU associate clinical professor of medicine, and resident Allen Stawis, MD, (College of Human Medicine, '73) confer during teaching rounds at Flint's Hurley Hospital.

Flexibility, the focal medical problem approach, and responsibility for our own learning are key components of medical education at Michigan State University's College of Human Medicine.

One phase of the MSU curriculum revolves around the concept of using focal medical symptoms — such as anemia, headache, edema, and chest pain — as the starting points and adding basic sciences input, pathophysiology, and etiology as they become appropriate for problem-solving. Learning this way is achieved in a manner similar to problem-solving techniques used in patient care. The system also allows flexibility in learning styles and encourages individual responsibility for reaching learning goals.

As an alternate to the learning system built around focal problems (which uses written resources, group learning and self-instructional materials), College of Human Medicine students can select a more traditional system with a majority of material presented by discipline in the lecture format, with only a small amount of group learning using focal problems.

Both learning systems have flexible time frames permitting students to move at varying speeds through the program.

Patient Care Clerkship

The dividing line between preclinical and clinical years is marked by a special introductory clerkship "Fundamentals of Patient Care," which serves as the beginning of community medicine at MSU. Solidly oriented around family practice, the clerkship enables students to view and participate in variations of clinical medicine as practiced by the family physician.

The clinical years are spent in clerkships in one of several Michigan communities, utilizing local hospitals and other patient care facilities. Although the community programs are in different stages of development — each with its own particular flavor or local "personality" — all support a clinical faculty-student ratio of 1:1 and all encourage increasing responsibilities for patient care on part of the student clerk.

Student Involvement

Student involvement at MSU is not lip service. We have elected student representatives on committees related to curriculum development, admissions, evaluation of student performance and others. These students have contributed with sensitivity and force, and have voting as well as verbal privileges. Through the small group, focal problem-learning system an almost 3:1 student faculty exchange has occurred with resulting better understanding of where each is coming from.

Secondly, the students are individually quite diverse. For example, the class entering in 1972 contained 88 students: 25 women and 63 men, 10 black and 78 white individuals with tremendous variation in background and age. Age ranged from 19 to 35. Some students entered after three years of college, others had several years of other experiences such as teaching, Peace Corps, nursing, technicians, advanced degrees. This tended to decrease the naivete with which individuals viewed or participated in various activities.

Women at CHM

The women in our class have demonstrated that the worries of medical educators are unfounded. (Total enrollment at the College of Human Medicine for the 1975-76 academic year includes 146 women and 257 men.) While a few students have dropped out of school or decided to take time out, none of them has been female. There are several who have married, one has had a baby and others already have children or are married. They are as active and singleminded in their goal to be good practicing physicians as anyone else. We have had a woman as SAMA president, female class chairman, and other women elected committee members.

Ms. McKibben is a Year IV student in the MSU College of Human Medicine

Regression of Metastatic Melanoma

By S. Gunale, MD
Rochester, N.Y.
W.G. Tucker, MD
Kalamazoo

Abstract

An elderly patient with metastatic melanoma is described. While receiving combination chemotherapy (BCNU, DIC, and Hydroxyurea), he continued to have increasing disease. After the therapy was discontinued, he developed a complete remission. Possible mechanisms of such a regression and suggestions in the planning of chemotherapy of melanomas are discussed.

Introduction

Variable and unpredictable behavior by malignant melanoma has been documented. A variable period of time may elapse between the occurrence of a primary lesion and the appearance of metastases[1]. Metastatic melanoma may also occur in the absence of an obvious primary lesion[2]. Smith et al[2] have reported in such patients a spontaneous regression of the primary lesion when metastatic disease becomes evident. Spontaneous remissions have also been reported in melanomas[1,3]. Lewis and his co-workers[4] have demonstrated the presence of tumor specific antibodies to melanoma cells. The antibodies are present when the disease is localized and absent when it is widespread[5,6,7]. These observations have increased the attempts to treat this disease by immunotherapy. We encountered a patient who had documented metastatic melanoma which showed minimal response to combination chemotherapy, but his disease regressed completely after the chemotherapy was discontinued.

Case History

An 82 year old white male was admitted to Borgess Hospital, Kalamazoo, on 8/20/73 for evaluation and therapy of metastatic melanoma. In 1960, he had a resection of a chest lesion from the left pectoral area and was told that he had a melanoma. In 1970, he developed a stroke resulting in left hemiparesis. He then received anticoagulants, vasodilators, and antihypertensives. Subsequently, he made a complete recovery.

A few weeks prior to the present admission, he noticed a nodule in the left axilla. He reported to his physician and a biopsy was performed. The biopsy showed a metastatic melanoma in the lymph node. The patient was then transferred to Borgess Hospital for further therapy.

The physical examination revealed a well built, elderly, white male who looked younger than his stated age. He had multiple firm, variable in size, non-matted lymph nodes in the left cervical and left axillary area. The rest of the examination was unremarkable. An x-ray of the chest, bone survey, and liver scan did not show any evidence of metastatic disease. Protein and immunoelectrophoresis were within normal limits. Serum calcium was 8.7 mgs%; BUN, 25 mgs%, and uric acid, 5.5 mgs%. Total proteins were 6.5 gms with an albumin of 3.5 gms%. Bilirubin, alkaline phosphatase, SGOT, and LDH were normal. BSP was 8.7% retention at 45 minutes (normal less than 10%). Prothrombin time was 14 seconds. Intermediate strength PPD skin test was negative. Hemogram was normal and the bone marrow showed no malignant cells.

The patient was begun on the combination chemotherapy with 1,3-BIS-(2-Chloroethyl)-1-nitrosourea (NSC-409962-[BCNU]), Hydroxyurea (Squibb, [Hydrea]), and Dimethyl triazeno imidazole carboxamide (NSC-45388-[DIC]). Hydrea and DIC were given every three weeks and BCNU with every alternate course of DIC and Hydrea (Southwest Chemotherapy Protocol no. 7216). At the end of two courses of the therapy, there seemed to be a slight decrease in the size of the lymph nodes. There was definite evidence of an increase in the size of these lymph nodes during the sixth course of treatment. The patient was considered a failure on the therapy. Because of the unavailability of a satisfactory alternate therapy, and because the patient also wished to spend some time in Florida, it was decided not to further treat him.

After three months he returned and the physical examination then revealed a remarkable decrease

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in the size of these lymph nodes. A month following that, the lymph nodes of the left neck and the axillary region had completely disappeared and there was no evidence of disease elsewhere. The patient is being followed presently without any specific therapy.

Comments

The response of the melanoma in this patient is unique in the sense that it can neither be categorized as a spontaneous remission nor a response to the chemotherapy. Spontaneous remissions of metastatic melanoma, and, or primary disease, have been attributed to the body's defense mechanisms in the form of immunological reactions[3,4]. The exact nature of these immunological reactions is uncertain. The presence of tumor specific antibodies in the patients with localized melanoma may suggest that the occurrence of metastatic disease is kept under control by the immune reactions, and the presence of disseminated disease suggests breakdown of body defenses[4,5]. The tumor antibody status of our patient was unfortunately not studied, but the development of the lymph node metastases after a period of twelve years would suggest undermining of the defense mechanisms allowing the tumor to grow[6].

When chemotherapy was administered, there seemed to be minimal decrease in the size of the tumor mass for the first three months. The nodes then appeared to be increasing in size, suggesting an increase in tumor mass. The patient did not receive any therapy for three months and when seen showed complete regression of these metastatic masses. BCNU is a long acting drug[8] and delayed responses could conceivably occur with its use. Our patient had received three doses of BCNU and six months elapsed from initial administration. This would be an adequate period to see even a delayed response from BCNU. Therefore, the response obtained in our patient cannot be directly attributed to BCNU.

It is possible that the increase in the size of the nodes (felt clinically) was not due to an increase in the disease but due to immunological reactions in the lumph nodes to the tumor. It is speculative that the drugs given to this patient somehow altered either the size of the tumor mass or the immunological mechanisms, or both, and thus helped achieve complete remission. One important implication of this clinical observation could be in the planning of chemotherapy for patients with melanoma. Those who do not have metastatic disease to the vital organs like the liver, brain, or lungs could be treated for a period of time, then if no response occurs, the therapy could be discontinued and the patients observed for any change in their disease. This would not be an unethical or an unrealistic course to follow because at present alternative forms of therapy are generally not available to treat such a resistant malignant tumor.

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A Volumetric Assessment of Pollen Levels In the Air of Ann Arbor, Michigan

By William R. Solomon, M.D.
Ann Arbor

The value of accurate data describing aeroallergen prevalence has been recognized for almost a century, and has motivated many surveys of airborne biological particles. Remarkably few studies[1-4] have been reported from Michigan, however, considering the state's substantial population and the widespread public and professional awareness of allergic disease. Furthermore, all available local data share the limitations of the gravity slide method employed; viz., a tendency for preferential collection of relatively large particles, high sampling "error" due to the relatively sparse recoveries obtained and an absolute inability to relate the catch to index volumes of air.

The development of practical volumetric collectors, within the last two decades, has permitted estimation of airborne particle levels directly, facilitating valid spatial comparisons as well as sequential studies at a single point. Available devices[5,6] collect generous samples and recover different-sized particles with *calculable* if not equivalent efficiency.

These capabilities have prompted an extensive reassessment of airborne pollen and spore levels in our locality. The resulting volumetric data, of which this is an initital report, have clarified the status of recognized allergens and suggested additional particle types that warrant initial clinical attention.

Methods

Throughout the years 1970-72, an intermittent rotobar sampler[7] was operated on the unobstructed roof of the Kresge Medical Research Building, 50 feet above grade in Ann Arbor. This device impacted particles on sampling surfaces which were rotated at approximately 1,700 RPM during 20-second intervals every 12 minutes. Collections were made on the 1mm edges of paired metal bars bearing 1" wide transparent tape coated with Lubriseal® grease (A.H. Thomas Co., Philadelphia, PA.)

After exposure, tape segments were removed, applied to the broad faces of 1 x 3" microslides and mounted with hard glycerine jelly beneath 22 x 30 mm coverslips. Particles retained on the 1" x 1 mm sampling strips were viewed microscopically by transmitted light and identified with the help of field-collected "known" materials and standard manuals[8-10]. Since each bar swept out 0.598 meters^3 of air during 24 hours of intermittent operation, mean counts were related to this volume for each pollen type. Data were expressed as "particles retained/meter^3 of air sampled."

An ongoing botanical survey was continued during the period of this study and correlated with a previously reported[11] study of floral phenology at the Matthaei Botanical Gardens. Special attention was directed toward potential pollen sources in the urban area immediately around the sampling site.

Results

Twenty varieties of tree pollens as well as 15 categories typical of grasses and other nonarboreal species were recovered at (or exceeding) five grains/M^3 during each annual cycle. On collation of these data, marked year-to-year differences in the appearance, disappearance and peak prevalence times of many pollens — especially those of trees — were prominent.

Since graphs of average values suggested "pollen seasons" that were factitiously long and limited in intensity "idealized" prevalence curves were generated; to facilitate this, all possible dates were assigned numbers from 1 to 365. For each pollen type, the second date of recovery in each of the three years was determined, and the mean of these dates used to mark the "beginning" of the respective prevalence period. Similarly, the "end" of each season was defined as either the final date on which a level of 1 grain/meter^3 (or higher) was recorded or the fourth from final date of recovery at any level; the mean of these values was recorded for each pollen category. The average date and mean height of peak concentration for each type were also determined and, where possible, the timing and values at 20% and 80% of peak concentration also calculated.

Figures 1 and 2 show prevalence curves, constructed in this manner for tree pollens and emanations of herbaceous species respectively. For each category, the most probable source species, based upon field observations, are listed in appendix 1. Where skewness or secondary peaks were consistently evident in the raw data, curves were modified to reflect these features. The

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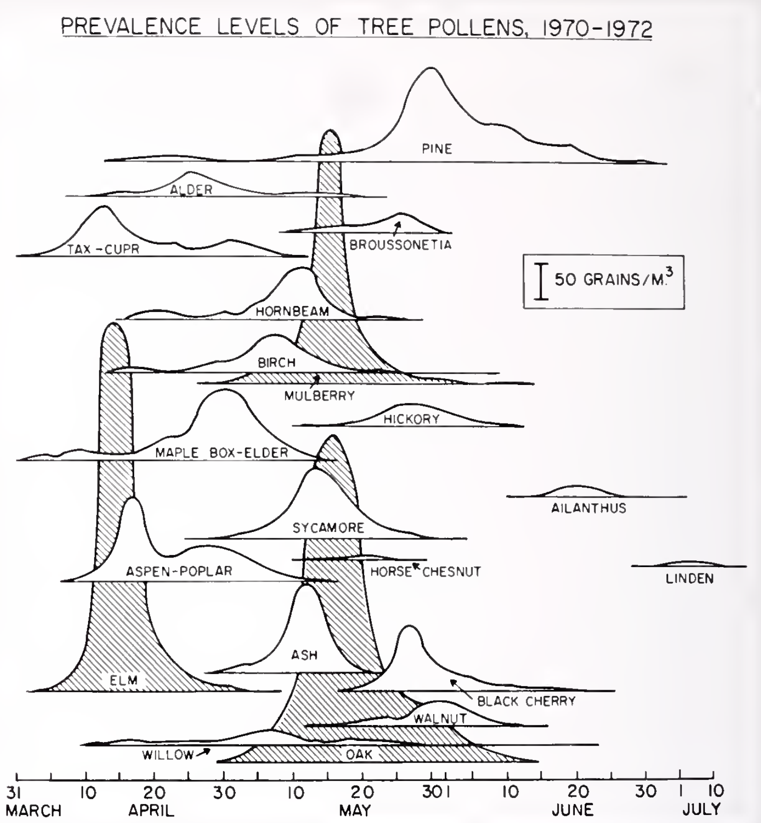

Figure 1.

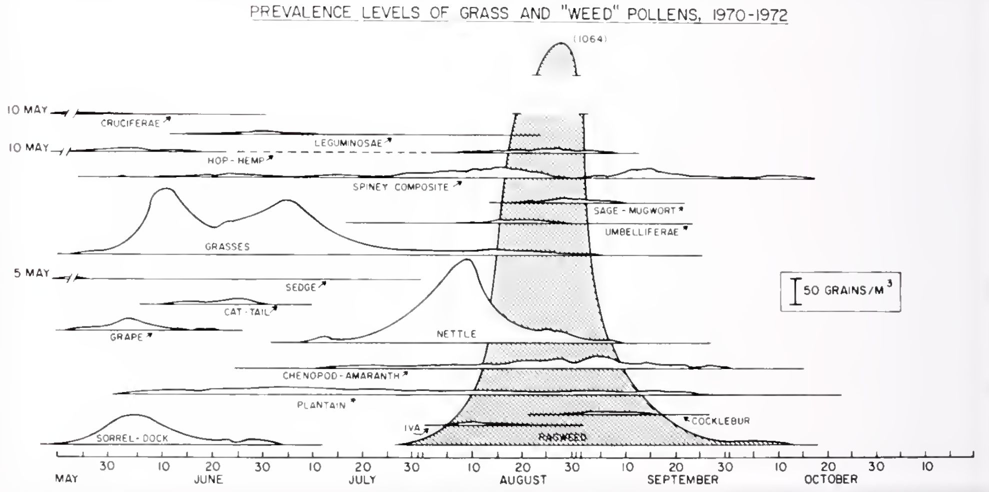

Figure 2.

symmetry of the remaining plots reflects the five points, (peak, 20 and 80% ascending and 20 and 80% descending) on which they are based.

Figure 1 emphasizes the relative prominence of three tree pollen types — elm, oak, and mulberry — at this station. Levels achieved by other pollens early in the growing season were distinctly lower, with peaks generally below 130 grains/meter^3. However, the high *relative* prevalence of types such as sycamore, ash, black cherry and paper mulberry *(Broussonetia)* as well as of mulberry had not been evident from previous gravity slide studies at this site.

Figure 2 depicts the striking contrast between ragweed pollen levels and those derived from all other herbaceous sources. The modest volumetric levels determined for plantain and chenopod-amaranth pollens were especially surprising but consistent throughout the study period. By contrast, pollen typical of the nettles *(Urtica spp.)* was the "weed" type second in abundance to ragweed in each study year, reaching peaks over 150 grains/meter^3 just prior to peak pollination of ragweeds. Well-marked prevalence periods were evident also for emanations of mustards (Cruciferae), legumes (Leguminosae), amphiphilous (i.e., partially wind-pollinated) composites (Compositae) as well as hop *(Humulus)* and hemp *(Cannabis)* species, etc.

Despite the frequency and significant morbidity of grass pollenosis, mean 24 hour particle levels generally did not exceed 150 grains/meter^3. The origin of the bifid prevalence curve in sequential pollen shedding by orchard grass *(Dactylus glomerata)* and timothy *(Phleum pratense)* was confirmed by field studies.

Thirteen additional types reached levels of one grain/M^3 in each year of the study. Unidentifiable grains comprised less than 0.2% of the total catch and did not exceed 4 grains/M^3 in single samples.

Discussion

Despite the advantages of volumetric data, their application to clinical practice requires recognition of certain qualifying factors. It should be clear, for example, that the present data (i.e., "particles *retained*/meter^3 of air sampled") differ from true prevalence levels (i.e., "particles/meter^3 of ambient air") by factors reflecting the adhesive and impaction efficiencies of the collector used. Since such factors are not known precisely or estimated by other workers, no attempt was made to apply them to the present data. However, studies in our laboratory have suggested overall rotobar efficiencies for short ragweed pollen grains approximating 60%[7], and roughly similar values should govern the recovery of other pollens.

Since many particulate types display characteristic diurnal prevalence changes, levels well above and below the mean 24-hour values reported must have occurred at least briefly. For most pollen types, ratios of one hour peak to 24 hour mean levels exceed 4.0 only occasionally; however, for ragweed pollen, values of 10 or more are not rare.[12] Unfortunately, the potential clinical impact of these levels must remain speculative until dose-response relationships for aeroallergens are clarified.

Although the floristic setting of our sampling station was qualitatively similar to many urban situations in southern lower Michigan, local source effects were inescapable. The annual flowering of several male red mulberry trees *(Morus rubra)* in the immediate vicinity may have provided an important particle source. Similarly, as elms are restricted increasingly to communities, such as Ann Arbor, with spraying programs, urban-rural differences in pollen distribution can be expected. For many pollen types, however, rooftop prevalence within cities is distinctly lower than that close to ground in various natural communities.[13] Such spatial differences have been shown most strikingly for ragweed pollen and relate to sources adventive in cereal grain fields.[14] Caution is essential, therefore, in applying prevalence data from one site to areas even moderately distant.

Only a few volumetric studies of airborne pollen, permitting comparison with this report, have been published. British workers have documented grass pollen levels at both Cardiff, Wales[15] and London, England[16] that exceed Ann Arbor recoveries regularly by two-to-threefold. At Cardiff, reported concentrations of nettle, ash, sorrel, willow, chenopod-amaranth and birch pollens have been quite similar to Ann Arbor recoveries; however, the Welsh data suggest far lower levels for categories such as elm, oak, pine, maple, poplar and sycamore. As judged from graphic plots of rotoslide data, ragweed pollen prevalence at Baltimore, Maryland[17] is, at least, no less than our own.

Volumetric studies have special value in defining areas for clinical investigation. Initial evidence for health effects of sorrel *(Rumex)*[18] and nettle[19] pollens already has resulted from work stimulated by such aerometric data. The present findings suggest that sources including black cherry, the hornbeams, the amphiphilous compositae and members of the Taxaceae and Cupressaceae may also contribute to the severity of pollinosis in Michigan.

Appendix 1.

Indicated Source Species For Pollen Categories

Tree

Taxaceae-Cupressaceae — Yews *(Taxus spp.)*, March-April; junipers, especially *J. virginiana*, April
Maple-Box Elder — Silver *(Acer saccharinum)* and red *(A. rubrum)* maples, early April; box elder *(A. negundo)*, April-May
Willow — Diverse species, especially *Salix nigra*
Birch — Several species, especially paper birch *(Betula alba var. papyrifera* and 'European' white birch *(B. pendula)*
Hickory — Several species *(Carya spp.)*
Ash — White ash *(Fraxinus americana)*
Walnut — Black walnut *(Juglans nigra)*
Sycamore — the introduced plane tree *(Plantinus acerifolia)*
Aspen-Poplar — Aspens *(Populus tremuloides & P. grandidentata)*, March-April; poplar *(P. deltoides)*, April-May
Oak — Several species, especially red oak *(Quercus rubra)*
Black Cherry — *Prunus serotina*
Elm — *Ulmus americana*
Alder — Several species *(Alnus spp.)* including ornamentals
Horse Chestnut — *Aesculus hippocastanum*
Ailanthus — Tree-of-heaven *(Ailanthus glandulosa)*

Broussonetia — Paper mulberry *(B. papyrifera)* — not prominent in our area; this pollen may reflect long-distance transport
Pine — Several ornamental species especially Scots pine *(Pinus sylvestris)* and Austrian pine *(P. nigra)* as well as the native white pine *(P. strobus)*
Linden — Diverse native and ornamental types *(Tilia spp.)*
Hornbeam — Primarily *Carpinus caroliniana*

Herbaceous Plants

Ragweed — Short ragweed *(Ambrosia artemisiifolia)* and giant ragweed *(A. trifida)*
Plantain — Primarily narrow-leafed plantain *(Plantago lanceolata)*
Chenopod-Amaranth — Many species, especially lamb's quarters *(Chenopodium album)*, August, and burning bush *(Kochia scoparia)*, August-September
Sorrel-Dock — Several species, especially sheep sorrel *(Rumex acetosella)*
Nettle — Common nettle *(Urtica>>gracilis)*wood nettle *(Laportea canadensis)*
Spiney Composite — Diverse species, including horseweeds, asters and goldenrods
Cat-tail — *Typha angustifolia* and *T. latifolia*
Hop-Hemp — Common hop *(Humulus lupulus)*, May-June; hemp *(Cannabis sativa)*, August-September
Leguminosae — Diverse members of the pea family, especially the sweet clovers *(Melilotus spp.)*
Cruciferae — Diverse members of the mustard family
Sedge — Diverse members of the Cyperaceae, especially *Carex* species
Sage-Mugwort — several *Artemisia* species
Umbelliferae — Primarily wild carrot *(Daucus carota)*
Grape — Various native, vining *Vitis* species
Cocklebur — Several *Xanthium* species
Iva — Probably *Iva xanthifolia* via long distance transport

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"And we should be especially thankful that the middlemen aren't here yet."

Germ Cell Tumors of the Central Nervous System: A Case Report and Review of Literature

By Lavanya V. L. Bobba, MD
Suman Goyal, MD
Allan D. Stilwell, MD
Pontiac

Abstract

Intracranial new growths of germ cell origin are among the rarest of tumors. The literature has been reviewed on 70 cases. The pineal and extrapineal (pituitary, suprasellar, chiasma and third ventricle) are the sites of predilection for these tumors. All patients were children or young adults. Visual disturbance and diabetes insipidus were the most frequent early clinical manifestations. Surgical decompression followed by radiation therapy offered the best hope for cure and alleviated the symptoms in others.

A case report of a 10-year-old boy at St. Joseph Mercy Hospital, who had a germ cell tumor of the third ventricle and died 18 months post diagnosis and treatment, is presented.

Report of a Case

A 10-year-old Caucasian boy was first admitted to St. Joseph Mercy Hospital, Pontiac, on 4-10-72 with complaints of severe frontal headache, vomiting, and lassitude of three weeks duration. Physical examination revealed no abnormal findings. He was investigated thoroughly and radiologic workup, including skull x-ray, arteriogram, left brachial arteriogram, ventriculogram, and brain scan, revealed a large mass involving the posterior part of the third ventricle with shift of pineal gland to the left. EEG revealed the presence of a deep level cortical disturbance. Lab workup was noncontributory. A ventriculoperitoneal shunt was performed to relieve the obstruction, and he was started on cobalt therapy as an outpatient.

The patient was readmitted on 8-14-73 with severe headache and vomiting. Examination revealed left-sided facial weakness. Repeat workup showed rapid growth of the intracranial tumor. The ventriculoperitoneal shunt was readjusted. At this time, chemotherapy with BCNU (1, 3-bis (2-chloroethyl)-1-nitrosurea) was started and he was discharged.

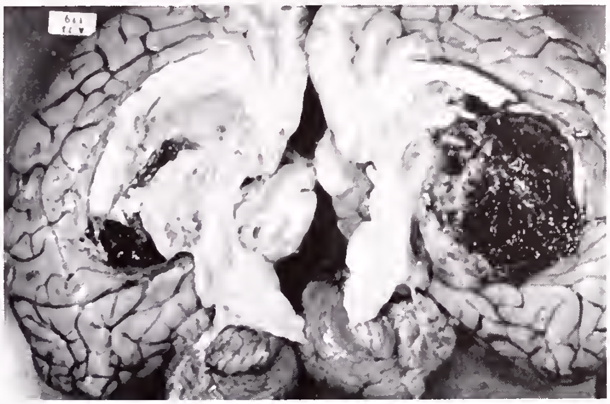


Fig. I. Sagittal sections of the brain showing necrotic tumor mass involving the posteromedial part of the thalamus, third ventricle with extension into the corpus callosum and cerebral cortex.

The patient was readmitted to the hospital a month later with persistent vomiting and severe headache. He was very lethargic and had left hemiparesis and bilateral papillaedema. He expired on 9-11-73, approximately 18 months after initial onset of symptoms.

Autopsy Findings

At autopsy, he was of average size for a 10-year-old boy. There were no gross signs of wasting, emaciation, hair loss, etc. No external or internal abnormalities of the chest or abdomen were seen. The external genitalia were normal.

The main findings were confined to the brain, which weighed 1420 gm. (normal 1370 gm.) and showed an irregular 10 x 8 cm. yellow-brown mass with areas of necrosis, hemorrhage and cystic spaces. **(Fig. 1)**. The tumor involved the medial and posterior part of the right side of the thalamus, the third ventricle with extension into the corpus and adjacent right cerebral cortex. The pinal gland was not identified. The cerebellum and pons were free of tumor. A 2 cm. necrotic tumor nodule was identified in the dura mater near the base of the brain.

Microscopic Examination

Microscopic examination of the mass showed a

Doctor Bobba, is a second year resident in pathology and Doctor Goyal, is a first year resident in pathology at St. Joseph Mercy Hospital, Pontiac, where Doctor Stilwell, is associate director of laboratories.

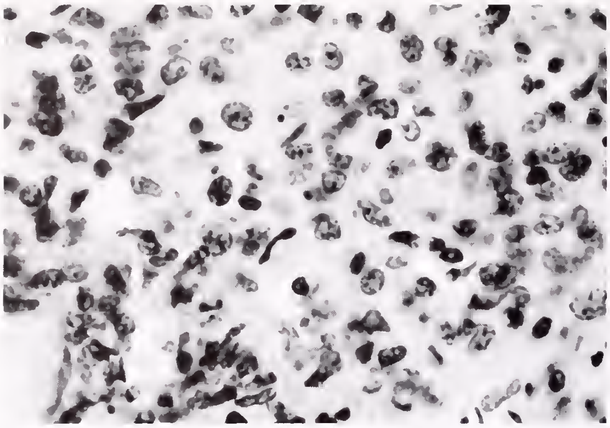


Fig. II. Microscopic examination of the tumor shows pleomorphic embryonal carcinoma cells with round vesiculated nuclei, peripheral clumping of chromatin and prominent nucleoli. (H&E / 400 mag)

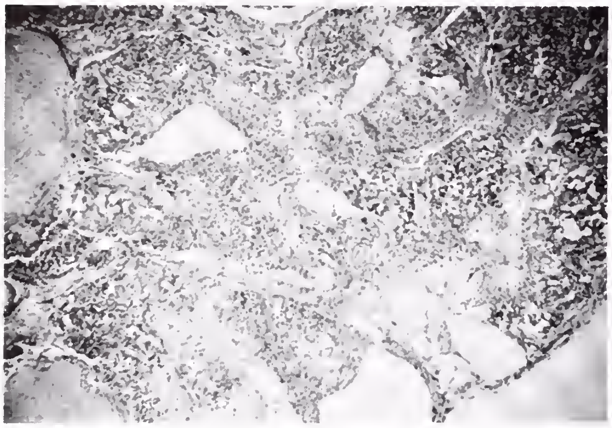


Fig. III. This section shows mature hyaline cartilage and embryonal carcinoma cells forming gland-like structures. (H&E — 25 mag)

variable appearance with large areas of hemorrhage and tumor necrosis. The major pattern of viable tumor mass was made up of pleomorphic cells with a poor cellular outline, round vesiculated nuclei with prominent nucleoli, peripheral clumping of chromatin and several mitotic figures. These cells were arranged around blood vessels, in poorly defined gland and in solid sheets of cells. **(Fig. 2)**

Some mature elements were identified among these cells, mostly forming hyaline cartilage, mucinous glands, and respiratory epithelium, and a minimal stromal infiltration of lymphocytes was noted. **(Fig. 3)**

A histological diagnosis of teratoma with embryonal carcinoma was made.

Observations

Age and Sex Distribution **(Table 1)**

Germ cell tumors are more common in children and young adults with an age range of 5 to 25 years. Of the 70 cases reviewed from the literature, the tumor was found in 46 males comprising 60.6% and 24 females with a percentage of 39.4%. The peak incidence of the tumor was in the second decade with 47 patients belonging to this group, nine were below 10 years of age and 14 were above 20 years, including two patients above 30 years.[8,12]

Table I
AGE INCIDENCE FOR 70 PATIENTS

Age (yrs)	Males	Percentage	Females	Percentage
0-4	0	0	1	4.0
5-9	5	10.9	3	12.5
10-14	15	32.7	16	66.6
15-19	14	30.4	2	8.1
20-24	9	19.6	2	8.1
above 25	3	6.5	0	0
Total	46	60.6	24	39.4

Table II
SYMPTOMS

Symptoms	Number	Percentage
Diabetes insipidus	40	57.1
Increased intracranial tension	21	30.0
Visual	39	55.7
Endocrine	28	40.0

Clinical Manifestations **(Table II)**

In reviewing the literature, we found little detailed data on clinical presentation and progress. However, the majority of patients presented with complaints of diabetes, insipidus (57.1%) and visual disturbances (55.7%), such as a blurring of vision, diplopia and progressive visual deterioration. Precocious puberty was detected in only five patients,[4, 10, 12, 16, 17] while other endocranial symptoms such as hypopituitarism, hypogonadism and hypothyroidism occurred in 20 patients (40%). Symptoms of increased intracranial tension, i.e., headache, vomiting, papillaedema was a terminal event in most of the cases, but few had these as primary symptoms.[2, 3, 5, 12, 15, 19] These manifested either alone or in any combination. The average duration of symptoms varied between one week to two to three years. Some, however, were symptomatic for six to seven years[15, 18] with vague complaints like growth retardation, polyuria and drowsiness.

Table III
SITE OF TUMOR

Site of Tumor		Number	Percentage
Pineal		12	17.0
Extrapineal:	Third ventricle	29	41.4
	Chiasma	10	14.3
	Suprasellar	13	18.6
	Pituitary	6	8.6

Site of the Tumor **(Table III)**

Forty-seven percent of the patients had autopsies. All had midline tumors present somewhere in the region of the optic chiasma and the pineal, corpus callosum and pituitary fossa. Tumor involvement of extracerebral sites were seen in approximately one-third [5,10,12,19,21] with equal incidence of menigeal and pulmonary metastases. Few cases with spinal cord[5] and one with paraspinal cord[5] metastases were present. A definite identification of the pineal gland as separate from the mass was made in 25%, but in most cases the tumor involved neighboring structures.

Table IV

TYPE OF TUMOR

Type of Tumor	Number	Percentage
Germinoma	34	48.5
Teratoma	18	25.7
Teratoma with germinoma	9	12.8
Choriocarcinoma	3	4.3
Teratoma with embryonal and choriocarcinoma	1	1.4
Teratoma with choriocarcinoma and germinoma	1	1.4
All four types	1	1.4
Germinoma with embryonal carcinoma	1	1.4
Germinoma with choriocarcinoma	1	1.4
Embryonal carcinoma	1	1.4
Total	70	

Type of Tumor **(Table IV)**

From the review of the cases, 48.5% were histologically diagnosed as pure germinomas. In the older literature, most of these tumors were called ectopic pinealomas, but later the terminology of germinomas was applied to these tumors because of similarity of the histological appearance to similar tumors found elsewhere in the body[11,16,17] like testes, ovaries, and mediastinum. The second most common germ cell tumor is the benign teratoma with an incidence of 25.7% and the combined form of the two (malignant tertoma) comprises the third common tumor 12.8%. Other variants of germ cell tumors like choriocarcinoma and embryonal carcinoma are rare and three cases[12,19] of the former and one case[12] of the latter tumor have been reported in the reviewed literature. Various combinations of these tumors with three or four histologic variants occuring simultaneously have also been observed.[4,10,12]

Treatment and Survival **(Table V)**

Palliative surgical intervention followed by radiation therapy seems to be the most effective mode of treatment[1,15,18] for alleviating symptoms and prolonging survival. This treatment was offered to 24 patients and mean survival of 4.2 years and maximum of 18 years[18] was seen in these patients. Surgery, however, either for biopsy or for attempted resection, appears hazardous, as 13 patients out of 20 died postoperatively[2,12,16,17,18]. Six patients had radiation alone[5,15] with mean survival of 2.7 years and maximum five years. Nine patients were untreated,[5,7,10,11,16,20] the mean survival in these patients was 0.7 years. Out of 70, 11 patients were lost to followup.

Table V

TREATMENT & SURVIVAL

Type of Management	Number	Mean (yrs.)	Maximum (yrs.)
Radiation alone	6	2.7	5.0
Surgery alone	7	0.6	2.0
Combined treatment	24	4.2	18.0
Untreated	9	0.7	6.0

Post-operative deaths: 13 patients

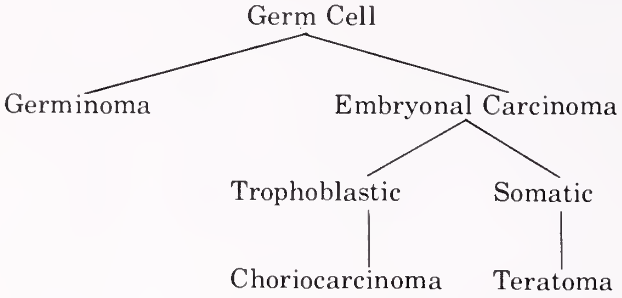
Discussion

The structural patterns of the germinal neoplasms of the pineal and parapineal areas are identical to germinal tumors arising in the gonads, retroperitoneum and mediastinum. All histologic variations and combinations of cell types are seen, with germinomas being the most common type,[13] as revealed by our review of 70 cases from the literature.

Clinically, these neoplasms always present as midline tumors in the central nervous system with no well-defined site of origin. Of tumors of the pineal body, a great majority are of germ cell category. Secondary involvement of neighboring structures through direct extension is common.

Males have a somewhat higher incidence of involvement with a maximum age incidence between 10 and 20 years. Visual disturbances are produced due to compression and infiltration of the optic nerves, chiasma or tract. Hypofunction of the pituitary is present, and as with the case with diabetes insipidus, may go undetected for longer periods,[5,15,18] especially in children. Raised intracranial tension and vague complaints of instability, weight gain, somnolence and lethargy are among the presenting symptoms. With the help of radiologic studies and brain scan, a diagnosis of possible germ cell neoplasm of the central nervous system can be made with reasonable certainty. At craniotomy, the site of the tumor can be defined and the extent of spread noted. Histology should leave no error as to the germ cell origin and the specific tumor cell type, seeing that the survival rates of germinomas following radiotherapy are significant.[15,18]

If total removal of the tumor is not possible, surgical intervention should be limited to symptomatic relief of obstruction, if present, and biopsy, as the figures for immediate postoperative death are significant.



It has now been demonstrated by experimental investigation that these tumors have a common cell of origin, the primitive germ cell.[13,14] During the process of development, small nests of these cells may be left in midline location or within tissues developing in the midline. The germinoma (seminoma) cell appears to be a mature differentiated cell, incapable of futher maturity.[13,14]

The embryonal carcinoma cell is multipotent and capable of differentiating into mature benign elements of the three germ layers or a cytotrophoblast. The teratoma is the only benign tumor of this category, but behaves as a malignant neoplasm when small portions have elements of other germ cell types. The choriocarcinoma is a highly malignant tumor, capable of gonadotropin synthesis, and in this case, precocious puberty may be the only presenting symptom.

Conclusion

From the review of 70 cases, we see that germ cell neoplasms of the central nervous system have a maximum age incidence of 10 to 20 years and are more common in males. They are always midline tumors in or around the third ventricle with diffuse infiltration into the surrounding structures. The most common tumors of this type are germinomas. Germinomas are extremely radiosensitive and therapeutic responses for palliative surgery with radiation gave best results.

The case reported here was a 10-year-old boy with a midline teratoma with embryonal carcinoma who received decompression surgery, radiation, and chemotherapy and survived for 1.8 years post diagnosis.

Acknowledgement

We wish to acknowledge Jacob Chason, MD, Chairman of Pathology Department at Wayne State University Medical School, Detroit, for reviewing the slides of the above case.

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Low Hyperbaric Therapy In Management of Leg Ulcers

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Andrew Zielinski, MD, PhD
Eloise

Synopsis – Abstract

A simple, inexpensive and effective method of treatment of leg ulcers with topical application of oxygen in plastic bag has been used in our hospital since 1964.

Results of treatment of 174 patients are discussed. The presented data demonstrate that the treatment was more successful in patients with chronic venous insufficiency than in patients with arteriosclerosis.

Since oxygen plays the integral part in successful treatment as a control study we measured its tension in the ulcer in different depths and under different partial pressures with employment of various gases. The highest value of PO_2 450mm of mercury was obtained when oxygen was applied under 760 mm of partial pressure. When air was applied the value was between 30 — 60 mm. When the outside source of oxygen was eliminated by applying nitrogen the value dropped to five mm of mercury.

The new method is very promising in post-traumatic and surgical wound healing.

A simple, inexpensive and effective method of treatment of leg ulcers that has been used in our hospital since 1964, includes topical oxygen application in a plastic bag* extended over the extremity twice a day under a pressure of 5 - 12 mm of mercury for 20 minutes.[1]

The beneficial use of oxygen for healing of skin lesions under high and low pressures given from 40 minutes to eight hours daily in sopisticated walk-in chambers, individual tanks, or through simple funnels and in plastic bags is well written and documented.

Illingsworth et al[2] treated patients in a large chamber; a few patients at the same time with ischemic ulcerations and pregangrenous states of the extremities with oxygen under two atmospheres of pressure two to three hours daily. The most important, immediate benefit was relief of pain and appearance of demarcation of gangrenous parts.

Baffes[3] treated patients with ischemic limbs with oxygen delivered through a mask in high pressure tanks for from one to one-and-a-half hours daily.

Slack[4] reported good results in the treatment of traumatic ischemic lesions of the limb but was dissappointed by results in the treatment of nontraumatic ischemia of the limb with hyperbaric oxygen given one to two hours daily at two-and-a-half atmospheres of pressure.

Recently, Rosenthal[5] reported treatment of pressure sores by hyperbaric oxygen in individual tanks with three atmospheres of pressure for two hours daily.

Bass[6] instituted treatment of various leg ulcers with two atmospheres of pressure for two hours daily.

Fischer[7] treated leg and sacral decubital ulcers in specially built chambers with topical oxygen at 40 mm of mercury pressure applied for eight hours daily.

Gorecki[8] applied oxygen under a pressure of 15 mm of mercury through a funnel applied directly to a sacral decubital ulcer for 15 minutes three to four times daily.

Method: Our Method

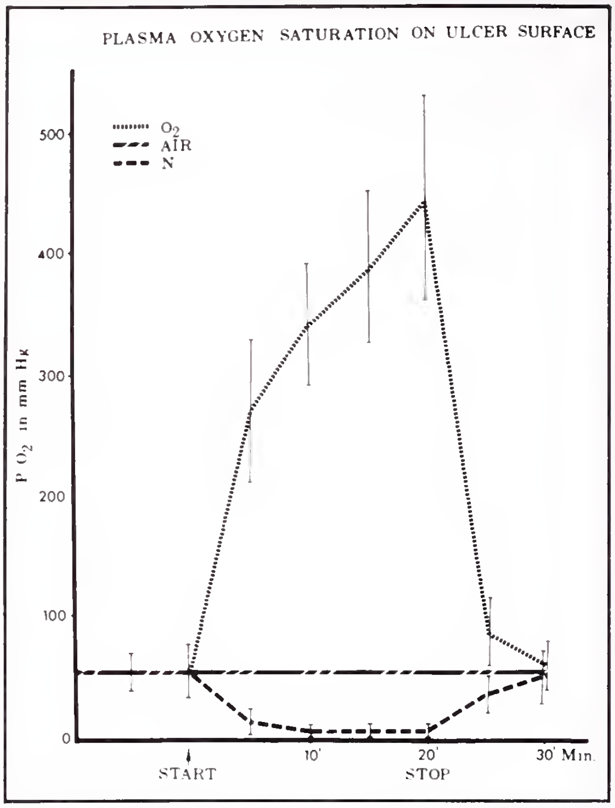
Low hyperbaric therapy means topical application of oxygen at pressures slightly higher than atmospheric, in our case 0 - 12 mm of mercury depending on the patient's tolerance with partial pressure of oxygen at 772 mm of mercury, with oxygen flow of three to four liters per minute.

A transparent bag made of a nylon-plastic material is placed over the ulcer-bearing extremity with a tourniquet of one-inch webbing and velcro attachments which are looped twice over

---

*Supplied by Stenobag Research Co., 1482 Lochridge, Bloomfield Hills, Michigan.

Doctor Olejniczak is clinical director, Department of Physical Medicine and Rehabilitation Wayne County General Hospital, while Doctor Zielinski is a research assistant in the Department of Physical Medicine and Rehabilitation, Wayne County General Hospital. He also is assistant professor, Department of Human Physiology, Medical Academy, Warsaw, Poland. ***Their paper is supported by Wayne County General Hospital Medical Staff Research and Education Fund and was presented at the AMA meeting in June, 1974, Section of Physical Medicine and Rehabilitation.***



the bag and the extremity and then closed with the velcro strap. The tourniquet is placed below or above the knee depending upon the patient's tolerance. Two tubes are connected to the bag, one from the oxygen tank and the other to the manometer. The bag is inflated and maintained at pressures of five to 12 mm of mercury which is equivalent to approximately ¼ pound of pressure per square inch, the level just below that of normal venous pressure. The pressure is adjusted to the patient's tolerance and is usually maintained at a flow of five to six liters of oxygen per minute.

The length of treatment is 20 minutes, and it is usually tolerated very well by the patient during which time there should be no change in color of the skin of the extremity in the bag. Higher pressures are likely to induce venous stasis with resulting pain and cyanotic discoloration of the skin of the portion of the extremity enclosed. Treatments lasting longer than 20 minutes could cause lymphedema as lymphatic pressure in the tissue is about five mm of mercury.

As soon as the pressure of the oxygen reaches the desired level, the patients who experience pain in the ulcer are mostly patients with arteriosclerosis and find relief from pain and often fall asleep. The short 20 minute sleep may be the first such sleep that the patient has experienced in many months. Within a few minutes of onset of the treatment, one may observe a rapid change in the color of granulation tissue from dark to bright red. The treatments are given twice daily.

Following the treatment, a dressing moistened with normal saline solution is applied to the ulcer to prevent drying out of the edges and the granulation tissue. Sometimes, the ulcer has to be debrided from necrotic particles without involvement of the healthy tissue.

In patients with chronic lymphedema, an ace bandage is applied to the extremity from the foot to below the knee following the treatment and, when the ulcer is healed, a Jobst stocking is provided to prevent recurrence of the lymphedema and ulcers.

Results

One hundred seventy-four (174) patients have been treated with the above described method of topical oxygen application from 1964-1972. The statistical data shown in **Table 1** includes the sex distribution, etiology of the ulcer and results of the treatment. There were 81 men and 93 women treated. As healed, we classified the patients who showed an 80 to 100% improvement according to the size of the ulcer.

In regard to the etiology of the leg ulcers, 33 patients with post traumatic ulcers were healed. The majority of the patients in this category were in the younger age group.

The next group of 11 patients with varicosities as the etiology of the ulcers were all healed.

Of ninety-one (91) patients with post thrombophlebitis and venous insufficiency, 87 or 95% improved.

Patients with arteriosclerotic ulcerations showed the least improvement in healing as only 10 out of 33 were healed, 30% successfully. This could be understood considering the diminished blood supply through sclerotic vessels to the ulcerated areas. Most of the patients in this category stated that while being treated they had marked relief from pain.

We treated four patients with sickle cell anemia and only one out of four healed.

Table I

Results of Treatment of Leg Ulcers Exposed To Oxygen Under 12 mm of Mercury

Etiology	Number of Patients		Healed	Not Healed
	Female	Male		
Phlebitis	47	44	87	4
Varicose Veins	6	5	11	0
Arteriosclerosis	20	13	10	23
Post Traumatic	15	18	33	0
Sickle Cell Anemia	4	0	1	3
Lupus Erythematosus	1	1	0	2

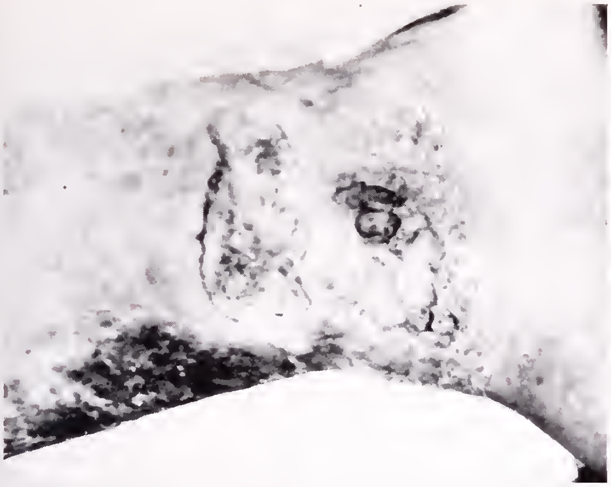


Fig. 1. Patient is 59 years of age, 300 pounds of weight
Duration of ulceration: 14 months
Etiology: venous insufficiency

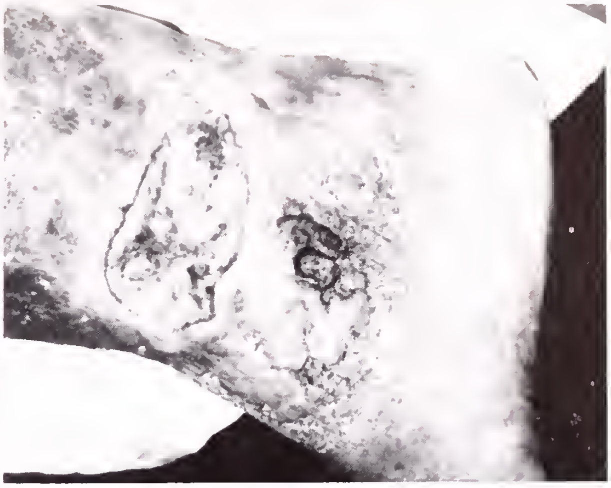


Fig. 2. After 1 month of hydrotherapy treatment given once daily.

Two patients with lupus erythematosus showed less than 80% imporvement, thus, we classified them as not improved.

We had several patients with large ulcers which were prepared for successful skin grafts following several treatments with low hyperabric therapy.

Beneficial effects of low hyperbaric therapy were observed in two patients with burns when the skin grafts were applied to the dorsum of the hands and low hyperbaric therapy treatment was instituted the following day. Complete healing took place in a few days with no limitations of motion in the MP, IP, and wrist joints.

In general, we can say that all ulcers, regardless of etiology, show initial improvement and only the general physical status of the patient and etiology of involvement would determine complete healing.

The rate of healing is very difficult to estimate but the progress of it could be observed almost daily. We do not use any antibiotics, parenterally or externally applied, or any ointments.

We do not culture the bacterial routinely from the ulcers. However, we did identify the pathogens and, most frequently, found Staphylococcus aureus and Escherichia coli which usually disappears before the ulcer heals completely.

Discussion

The results of low hyperbaric therapy in treating leg ulcers, which also include saline dressings and ace bandages in cases of lymphedema, are obvious. Most impressive were patients with ulcers of longstanding who had various methods applied without success and, then, a sudden favorable response was most gratifying with the use of the new method.

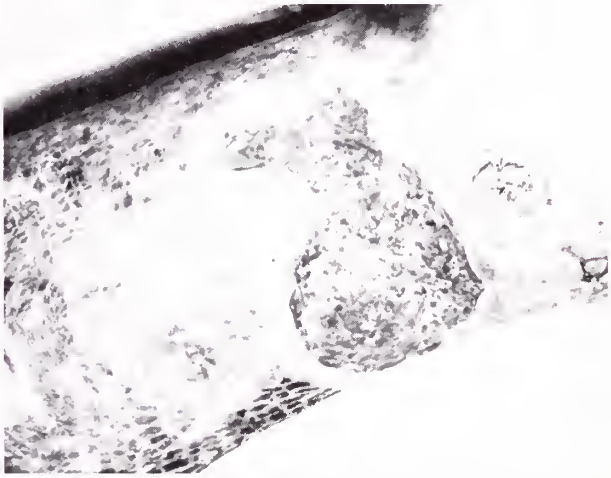


Fig. 3. After 1 month of topical oxygen application given once daily.

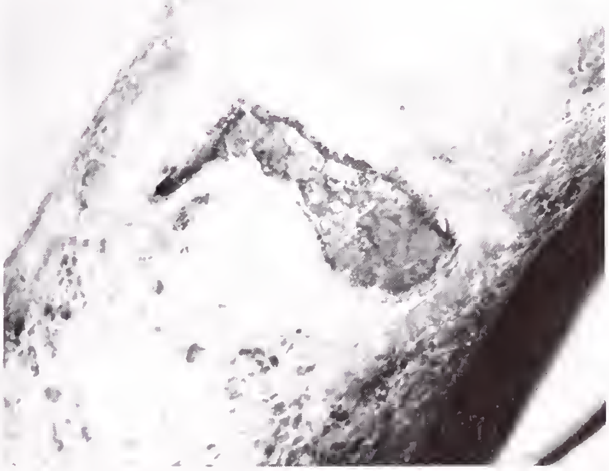


Fig. 4. After 6 weeks of topical oxygen application.

Clinical observation showed that the healing process of the leg ulcers could be divided into two stages. During the first stage, there is a cleansing period usually of one to ten days duration during which time the exudate disappears and the necrotic tissue can easily be removed. Fresh, well-outlined edges appear with granulation tissue seen in the base of the ulcer. In the second stage until complete healing takes place, the granulation tissue rapidly fills the ulcer and grows up to the surface and then the epithelium fills in from the edges. Some skin structures that might be preserved and are occasionally buried under the necrotic tissue, will reappear in the form of islands with regeneration of growth of epithelium.

The maintenance of the moist condition by wetting the dressings is of great importance to the proper growth of the epithelium. Otherwise, if exposed to the air for long periods of time, the edges of the epithelium will dry out and growth will be impaired.

Ace bandages used by patients with venous insufficiency when lymphedema is difficult to control, promote better venous return, nutrition and faster healing.

As far as the role of oxygen in the treatment is concerned, we feel it has stimulating effects on the body defense and repair mechanisms such as phagocytosis and stimulation of the growth of the granulation tissue and epithelium and, possibly, bacteriostasis.

We consider low hyperbaric therapy for skin ulcers as another modality in physical medicine, mainly to stimulate body defense mechanisms and healing processes by application of topical oxygen in a simple manner and a short time.

As in any new method of treatment in order to establish validity, control studies are required. Most of our patients had different methods employed throughout many months and sometimes years. Most frequently used were antibiotics, compressive dressings, different ointments and soaks and, since they failed, they were referred to us for treatment. Since most of the known methods were employed, each patient presented its own controls. In some patients in whom hydrotherapy was not used, we employed it for control studies for one month treatments given twice daily. During this treatment, we observed the progress of healing by measuring the size of the ulcers and changes taking place in the ulcer itself. We noted that progress in debridement took place but at a much slower pace usually not complete as in comparison with pure oxygen application. Some granulation tissue appeared but not as fast as when pure oxygen was used. When treatment was changed after one month to topical oxygen, debridement of the ulcer was usually complete in about five days with fresh granulation tissue covering the ulcer and epithelial edges growing almost from the first day.

From our experience and studies throughout the years, the method of topical oxygen application as described established itself as a superior one to any other known method.

In order to have further evidence that oxygen plays an integral part in the healing of leg ulcers and, since we observed during its application the change of color of granulation tissue from dark to bright red and established another form of control of our treatment, we decided to measure the oxygen tension in the ulcer in different depths and under different partial pressures with the employment of various gases.

Introduction

There is no doubt that oxygen is essential for sustaining life and integrity of tissues, and its presence is necessary for the repairing process of damaged ulcers.

Life can be sustained without blood but not without oxygen. Boerema[9] kept a pig alive after blood cells were removed with oxygen dissolved in plasma.

The problem of improving the healing process by applying oxygen under increased pressure is being investigated continuously in terms of physiological mechanisms taking place in the healing wound.[10]

In a normal breathing atmosphere, oxygen is carried in the blood, in the hemoglobin and plasma. Oxygen in the form of oxyhemoglobin consists of about 19.7 ml of oxygen in 100 ml of blood and in plasma there is 0.3 ml of oxygen in 100 ml of plasma. Our goal was to measure the oxygen in the plasma of the ulcer since this was the closest source of nutrition and oxygen supply of the regenerating tissue.

Materials and Methods

The polarographic method of measuring PO_2 was used with the employment of a differential oxygen analyzer*, model 145 MP, with a special oxygen electrode.

The utilization of an oxygen electrode was first discovered by Daniel in Nerust Laboratory in 1897-98. He proved that transmission of the low voltage current through platinum electrodes in water caused electrolysis of dissolved oxygen resulting in low current proportional to PO_2 tension. The following reactions take place in the vicinity of the cathode electrode.

$$O_2 + 2H_2O + 2\bar{e} \text{----} H_2O_2 + 2OH^-$$
$$H_2O_2 + 2\bar{e} \text{----} 2OH^-$$

The breakdown of O_2 alters the conductivity of the electrolyte solution and, as a result, the current flow is proportional to the concentration of O_2 in an electrolyte solution.

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*International Biophysics Corporation, Irvine, California

The oxygen electrode that we used was made out of gold wire with the tip covered by hydron. Hydron prevents contamination of the electrode with protein and allows it to be used in vivo. The speed of diffusion through hydron allows readings to be taken even with rapid changed of oxygen tension in the tissue. The PO_2 measurements were made on the surface of the granulation tissue and also at a depth of one mm.

It should be mentioned that PO_2 measurements in tissue are quite difficult and methods of measurements are not as dependable as PO_2 measurements in blood.

Tissue is not a homogeneous material but is composed of components of different densities with different rates of absorption and consumption of oxygen.

An additional difficulty stems from the fact that no matter how small the electrode is, it causes damage to the tissue followed by local ischemia resulting in different rates of utilization of oxygen. Insertion of the needle also causes local hemorrhage resulting in the measurement of PO_2 in blood instead of tissue.

In our investigations, PO_2 measurements were made in the interstitial fluid on the surface of the granulation tissue. In regard to the readings in the deeper parts of the tissues, we kept in mind the above listed difficulties.

Results

When the ulcers were exposed to air under 12 mm of mercury, partial pressure of oxygen on the surface of the granulation tissue was oscillated between 30 - 60 mm of mercury.

When pure oxygen in the bag was used under a pressure of 12 mm of mercury in the first two to three minutes, the value grew to the level of 200 mgm of mercury. The further increase in PO_2 tension was slower; however, after 20 minutes of exposure, the value reached 450 mgm of mercury. After oxygen was removed, the PO_2 dropped to the controlled values in the first two minutes and maintained itself at this level for the next five minutes.

Values of PO_2 obtained after 20 minutes of exposure to pure oxygen were maintained when application of oxygen was prolonged to 40 - 50 minutes.

In the investigations in which we used nitrogen instead of oxygen, we observed a drop in the PO_2 to an average of 12 mm of mercury in the first five minutes and then in the next five minutes there was stabilization of the PO_2 following low levels of PO_2 at an average pressure of 4.5 mm of mercury. Since the outside source of oxygen was completely eliminated, the values obtained represent an arterial supply of oxygen. Changing of nitrogen to air caused a rise in the PO_2 to the controlled levels.

Very minimal differences in the original values of PO_2 were found when pure oxygen and air were used with 1 atmosphere of pressure.

Recordings of PO_2 from deeper layers of the granulation tissue were less satisfactory because of difficulty in the exact measurement of the depth of the insertion of the tip of the electrode and from technical difficulties as mentioned previously due to local hemorrhage caused by the electrode insertion and pressure exerted by the electrode causing ischemia of the tissue.

The control values of PO_2 in the granulation tissue exposed to the air at a depth of one mm were lower than on the surface of the ulcer and values oscillated from 15 to 30 mm of mercury.

When the tip of the electrode was one mm or more under the surface of the granulation tissue, there was only slight or no change in the PO_2 during exposure of the surface to pure oxygen in the bag.

It seems that the gradient of oxygen saturation between the surface and the deeper layers of the granulation tissue is very high during low hyperbaric therapy and, for this reason, any strong influence of oxygen on vascularity is not probable.

Discussion

These results show that during low hyperbaric treatment, high oxygen saturation takes place in the plasma covering of the ulcer and in the superficial layers of the granulation tissue.

Keeping the surface of the ulcer moist is an important factor which allows maximum saturation of oxygen of the granulation tissue.

The experiment in the use of nitrogen clearly indicates that the outside environment of the ulcer is a very important source of oxygen for regenerating epithelial tissue.

The oxygen supply to the deeper layers of the granulation tissue comes mostly from the vascular bed. This fact could explain the negative results in healing leg ulcers despite the use of low hyperbaric therapy in cases of advanced arteriosclerosis when the delivery of oxygen to the tissue is markedly diminished.

Results of other authors show evidently that oxygen is a necessary element in processes underlying wound healing such as:

a) Epithelization[11], b) synthesis of collagen by fibroblasts[4,12], c) degree of cellular differentiation.[13]

The present study shows that low hyperbaric therapy supplements oxygen to the tissue of the ulcer which is not sufficiently supplied from the blood stream.

The main problem in the treatment of leg ulcers with low hyperbaric therapy is to find the proper ratio of time and pressure of O_2 exposure in order to stimulate and not impede the growth of granulation tissue. Favorable conditions for action of phagocytes and growth of the epithelium depend on optimal oxygen, tensions and times of exposure[11].

We hope that these investigations will encourage further studies of the beneficial effects of topical oxygen in healing of leg ulcers by the employment of histochemical and biochemical methods.

Topical oxygen application should be further studied in regard to surgical wound healing and skin grafting.

From experience, of the few patients treatea with open wound infections and skin grafting problems, the results are very encouraging.

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Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with special caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis. In severe dehydration or electrolyte imbalance, withhold Lomotil until corrective therapy has been initiated.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

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Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing, hyperthermia, tachycardia and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria, paralytic ileus, and toxic megacolon.

Dosage and administration: ***Lomotil is contraindicated in children less than 2 years old.*** Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

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When diarrhea has him reeling...

Diarrhea can hook anyone. When it does, physicians and patients both want prompt control of diarrheal symptoms. Lomotil will usually control diarrhea promptly.

This rapid action can halt the emergency aspect of diarrhea and is comforting and reassuring to the patient. Electrolyte and fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate specific therapy should be given along with Lomotil.

Lomotil is contraindicated in children less than 2 years old.

Lomotil® TABLETS LIQUID

Each tablet and each 5 ml of liquid contain diphenoxylate hydrochloride 2.5 mg (Warning: May be habit forming), atropine sulfate 0.025 mg

holds the line.

In hypertension,

ALDOMET® (METHYLDOPA|MSD)

usually offers more than effective lowering of blood pressure...

With ALDOMET (Methyldopa, MSD), existing renal function is usually unchanged

ALDOMET has no direct effect on renal function. When used in effective doses, ALDOMET usually does not reduce glomerular filtration rate, renal blood flow, or filtration fraction.

With ALDOMET (Methyldopa, MSD), cardiac output is generally unchanged

ALDOMET has no direct effect on cardiac function. When ALDOMET is used in effective doses cardiac output is usually maintained with no cardiac acceleration; in some patients the heart rate is slowed.

With ALDOMET (Methyldopa, MSD), symptomatic postural hypotension is infrequent

ALDOMET reduces both supine and standing blood pressure. Less frequent symptomatic postural hypotension is experienced with ALDOMET than with many other antihypertensive agents. Exercise hypotension and diurnal blood pressure variations rarely occur.

for hypertension

TABLETS, 250 mg, 500 mg, and 125 mg

ALDOMET®

(METHYLDOPA|MSD)

a unique antihypertensive agent

ALDOMET is contraindicated in active hepatic disease, hypersensitivity to the drug, and if previous methyldopa therapy has been associated with liver disorders. It is not recommended in pheochromocytoma.
It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

MSD
MERCK
SHARP&
DOHME

For a brief summary of prescribing information, please see following page.

MSD
MERCK
SHARP&
DOHME

addendum

to further simplify therapy for many patients

now available

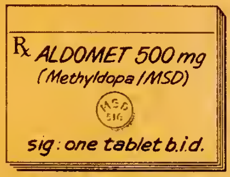
ALDOMET® 500 mg
(METHYLDOPA|MSD)

- **often more practical to prescribe**
- **easier for patients to remember**

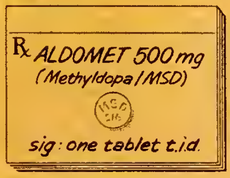
Now offered in addition to the standard 250-mg tablet, the new ALDOMET 500 mg tablet is a patient convenience. An especially important one, since in hypertension convenience of the dosage schedule is one factor that can make the difference in compliance of the patient. The minimum daily dose of ALDOMET is 250 mg b.i.d. The usual starting dose is 250 mg t.i.d. Dosage is adjusted as necessary by adding or deleting 250 mg or 500 mg at intervals of not less than two days. The maximum dose is 3.0 g per day.

Examples of b.i.d. or t.i.d. dosage convenience provided by ALDOMET 500 mg within the usual daily dosage range of 500 mg to 2.0 g:

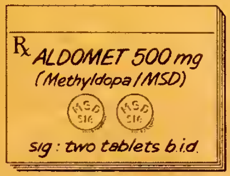
1.0-g daily dose =

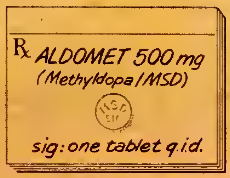

℞ ALDOMET 500 mg
(Methyldopa/MSD)
MSD 516
sig: one tablet b.i.d.

1.5-g daily dose =


℞ ALDOMET 500 mg
(Methyldopa/MSD)
MSD 516
sig: one tablet t.i.d.

2.0-g daily dose =


℞ ALDOMET 500 mg
(Methyldopa/MSD)
MSD 516 MSD 516
sig: two tablets b.i.d.


℞ ALDOMET 500 mg
(Methyldopa/MSD)
MSD 516
sig: one tablet q.i.d.

NOTE: Tablets shown are not actual size.

in hypertension

ALDOMET® (METHYLDOPA|MSD)

usually lowers blood pressure effectively

Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis; if previous methyldopa therapy has been associated with liver disorders (see Warnings); hypersensitivity.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between 6 and 12 months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at 6 and 12 months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first 3 weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first 2 to 3 months of therapy. In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first 6 to 12 weeks of therapy or whenever an unexplained fever occurs. If fever and abnormalities in liver function tests or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, a reversible reduction of the white blood cell count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur. Patients should be followed carefully to detect side reactions or unusual manifestations of drug idiosyncrasy.

Use in Pregnancy: Use of any drug in women who are or may become pregnant requires that anticipated benefits be weighed against possible risks; possibility of fetal injury can not be excluded.

Precautions: Should be used with caution in patients with history of previous liver disease or dysfunction (see Warnings). May interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, falsely high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. It is important to recognize this phenomenon before a patient with a possible pheochromocytoma is subjected to surgery. Methyldopa is not recommended for patients with pheochromocytoma. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Stop drug if involuntary choreoathetotic movem
occur in patients with severe bilateral cerebrova
lar disease. Patients may require reduced dose
anesthetics; hypotension occurring during a
thesia usually can be controlled with vasopress
Hypertension has recurred after dialysis in pati
on methyldopa because the drug is removed by
procedure.

Adverse Reactions: *Central nervous sys*
Sedation, headache, asthenia or weakness, us
early and transient; dizziness, lightheadedn
symptoms of cerebrovascular insufficie
paresthesias, parkinsonism, Bell's palsy, decre
mental acuity, involuntary choreoathetotic m
ments; psychic disturbances, including nightm
and reversible mild psychoses or depression.

Cardiovascular: Bradycardia, aggravation of an
pectoris. Orthostatic hypotension (decrease
dosage). Edema (and weight gain) usually reli
by use of a diuretic. (Discontinue methyldop
edema progresses or signs of heart failure app

Gastrointestinal: Nausea, vomiting, distention,
stipation, flatus, diarrhea, mild dryness of mouth,
or "black" tongue, pancreatitis, sialadenitis.

Hepatic: Abnormal liver function tests, jaun
liver disorders.

Hematologic: Positive Coombs test, hemo
anemia. Leukopenia, granulocytopenia, thr
bocytopenia.

Allergic: Drug-related fever, myocarditis.

Other: Nasal stuffiness, rise in BUN, breast enla
ment, gynecomastia, lactation, impotence, decre
libido, dermatologic reactions including eczema
lichenoid eruptions, mild arthralgia, myalgia.

Note: Initial adult dosage should be limited
500 mg daily when given with antihypertens
other than thiazides. Tolerance may occur, usu
between second and third month of therapy;
creased dosage or adding a thiazide freque
restores effective control. Patients with impa
renal function may respond to smaller doses.
cope in older patients may be related to increa
sensitivity and advanced arteriosclerotic vasc
disease; this may be avoided by lower doses.

How Supplied: Tablets, containing 125
methyldopa each, in bottles of 100; Tablets, cont
ing 250 mg methyldopa each, in single-
packages of 100 and bottles of 100 and 10
Tablets, containing 500 mg methyldopa each,
single-unit packages of 100 and bottles of 100.

For more detailed information, consult your
representative or see full prescribing infor
tion. Merck Sharp & Dohme, Division of Merc
Co., Inc., West Point, Pa. 19486

MSD MERCK SHARP & DOHME

Perinatal Tips

By Paul M. Zavell, M.D.
Detroit

The following case from the files of the Wayne County Medical Society Perinatal Mortality Study Committee is presented as an aid in continuing education.

Maternal

This was the fourth pregnancy of this 36 year old, Gravida IV, Para III (IV) white mother with A-negative blood type. Her third pregnancy six years ago seemed normal but the infant persisted with a severe "nose cold" for the first three-four weeks of life. When the infant was admitted to Children's Hospital of Michigan, the diagnosis of "congenital syphilis" was made. The mother was rechecked and found to have a positive VDRL and then treated with Erythrocin 250 mgm qid for 10 days by her obstetrician (she is allergic to Penicillin). The infant was also treated for 10 days, but with Penicillin, and has been followed since and found to be normal.

During this, her fourth pregnancy, her VDRL was taken early in pregnancy and found to be normal. However, a repeat VDRL taken at the time of delivery was reported questionable or weakly positive so that a repeat VDRL was done before she went home and sent to the state lab. Two weeks later this was reported back as strongly positive and an additional test (FTA) was also reported as strongly positive.

Her husband had reluctantly admitted to his wife six yrs ago to having had extra-marital relations but he vehemently denied having had any since that time (including this pregnancy). She also denied any extramarital exposure at any time to syphilis, etc.

This, her fourth pregnancy, had terminated uneventfully at 39 weeks in the birth of a male infant after four hours, 13 minutes. Labor and delivery course in the hospital for the mother was completely uneventful and she went home with the baby at five days post-partum.

Fetal

This seven pound, 14 ounce white male infant appeared normal at birth. Cord blood was A+ and +2 Coombs with 1.5 mgm % total bilirubin. For five days the infant was watched closely and became "slightly" jaundiced but total bilirubin reached only 10.0 mgm %. No VDRL was done and no specific treatment was given. After arriving home mother noted a nasal discharge (slight) in the infant but otherwise everything seemed fine and the jaundice slowly cleared.

Two weeks after delivery of this infant the mother received the call from her obstetrician noted above. She brought the infant to her pediatrician who examined him and found only "one pink spot" on the mid back and a slightly stuffy nose. A VDRL was done and found to be reactive. The infant was then admitted to a local hospital. Physical exam then confirmed those found in the office (but the "spot" had now disappeared).

Studies done in the hospital included: (1) Hgb of 17.2 gm, Hct of 52, Rbc of 5.09×10^6, WBC of 10,200 with 32 PMN, 02 Bd, 54 Lymph, 07 Monos, 05 Eosins, adequate platelets; (2) A urinalysis with yellow color, S-G of 1.004, pH of 6.0, negative protein, sugar, acetone and microscopic; (3) VDRL reactive and Quan. VDRL titer of 1/10,000 reactive, FTA-ABS reactive; (4) Liver studies of SGOT of 136, Total bilirubin 2.4 mgm %, SGPT of 42 and IGM of 27 (5-30); (5) Throat culture with heavy growth of E. Coli (repeated four days later and only scant growth of E. Coli noted then) sensitive to Tetracycline, Vibramycin, Kanamycin, Gentimycin, Colestin, Chloramphenicol, Cephalathin, and Ampicillin; (6) A urine culture with less than 10,000 colonies Enterococci and also less than 10,000 colonies of E. Coli sensitive to the same as noted above (plus *both* penicillin and Gantrisin); (7) A bone survey x-ray that was normal ("no periostitis or stigma of congenital lues").

After admission he was started on aqueous procaine penicillin 40,000 U IM every 12 hours. This was changed two days later to 50,000 U of aqueous crystalline penicillin every 12 hours. His hospital course was completely uneventful and the slight nasal stuffiness cleared up. After 10 days of penicillin he was discharged home. At four months of age a VDRL was reported as non-reactive. At five and a half months of age a FTA-ABS was considered borderline and at nine months of age the FTA-ABS was non-reactive. He was examined at one year of age and found to appear normal in all ways.

Perinatal Committee Comments

1. This case clearly shows the wisdom of getting both an early pregnancy VDRL (or its equiva-

(Continued page 720)

Doctor Zavell is a member, Neo-Natal and Hospital Care Committee, Michigan Chapter, A.A.P.; and is chairman, Perinatal Mortality Study Committee, Wayne County Medical Society.

When serum cholesterol demands attention...

patients may need...
- Diet control
- A proven cholesterol-lowering adjunct to diet*
- Convenient once-a-day dosage*
- Reasonable cost*

***Choloxin®**

(sodium dextrothyroxine)

An agent for low density lipoproteins, "type II hyperlipidemia," in euthyroid, non-cardiac patients

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

See reverse side for full prescribing information

Choloxin® (sodium dextrothyroxine)

The Lipid-Lowering Agent with Once-A-Day Dosage

Four strengths . . . 1, 2, 4, and 6 mg. . . . are available making the scored tablet regimen a flexible dosage system. And, for most patients, CHOLOXIN tablets offer once-a-day dosage.

> **AN IMPORTANT NOTE:**
> It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

CHOLOXIN® (sodium dextrothyroxine) Single-Tablet-A-Day Dosage Schedules

See prescribing information in package insert reproduced below.

	Starting Dosage	Increased Monthly by	Usual Maintenance	Maximal Recommended
Adult Hypercholesterolemic	1.0-2.0 mg.	1.0-2.0 mg.	4.0-8.0 mg.	4.0-8.0 mg.
Pediatric Hypercholesterolemic	0.05 mg./kg. body weight	0.05 mg./kg.	0.1 mg./kg. body weight	4.0 mg.
Hypothyroid Cardiac	0.5-1.0 mg.	1.0 mg.	4.0 mg.	4.0 mg.

Choloxin®

(sodium dextrothyroxine)

Description

CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine. It is chemically described as D-3,5,3′,5′-tetraiodothyronine sodium salt.

Actions

The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

Most of the available evidence indicates that CHOLOXIN stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces. Cholesterol synthesis is not inhibited and abnormal metabolic end-products do not accumulate in the blood.

Indications

This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease.

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication.

Before prescribing, note the following: Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively in patients with significant myocardial impairment. CHOLOXIN dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications

The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease, including angina pectoris; history of myocardial infarction; cardiac arrhythmia or tachycardia, either active or in patients with demonstrated propensity for arrhythmias; rheumatic heart disease; history of congestive heart failure; and decompensated or borderline compensated cardiac status.
2. Hypertensive states (other than mild, labile systolic hypertension).
3. Advanced liver or kidney disease.
4. Pregnancy.
5. Nursing mothers.
6. History of iodism.

Warnings

CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care. Special consideration of the dosage schedule of CHOLOXIN is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels. Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN. As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients, and in surgery in hypothyroid patients in whom it may be advisable to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who had required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age

Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug; it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions

It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly, they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHOLOXIN for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions

The side effects attributed to dextrothyroxine therapy are, for the most part, due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient, although its relationship to CHOLOXIN therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN; a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration

For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN is approximately 0.1 mg per kilogram. The initial daily dosage should be approximately 0.05 mg per kilogram to be increased in up to 0.05 mg per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

How Supplied

CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4, and 6 mg tablets.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

lent) and a repeat at the time of delivery to help in spotting cases of possible syphilis in pregnancy.

2. No statement of followup on the father is made here. This is usually a public health duty but cooperation between all doctors, nurses, patients etc. is needed to ensure proper followup.
3. Establishment of the diagnosis of syphilis in pregnancy can at times present a problem. One must remember that false positive VDRL's can result from use of various drugs, from lupus, from sarcoidosis, etc. Of help is the realization that VDRL, Wasserman, STS Kahn and Reitter are not truly specific in ruling out these possibilities. T.P.I., T.P.A. and FTA-abs are very sensitive tests and may then be of great help.
4. In treating syphilis, penicillin remains the drug of choice and where allergy to penicillin exists either tetracycline or erythromycin can be used. However, tetracycline should *not* be used in pregnancy (teeth staining and bone lesions could result in the newborn).

   Recommended penicillin doses for adults vary but in general are quite large compared to prior use. Current use ranges from one dose of 4.8 million units of Benzathine Penicillin to 10 million units given in two doses one week apart. In congenital syphilis 10,000 U/Kg body weight/day in two divided doses of aqueous procaine penicillin daily for 10 days has long been recommended and is probably still adequate (although higher doses of up to 100,000 U/Kg/day have recently been suggested).
5. Where penicillin allergy exists in the nonpregnant adult patient 500 mgm of tetracycline orally qid for 15 days or erythromycin one gram tid (or 750 mgm qid) for 15 days may be given (as stated previously use only erythromycin in such allergic pregnant patients).
6. Although not absolutely necessary it is considered wise for any infant suspected of possibly having congenital syphilis to have a lumbar puncture done to aid in proper long term management as well as treatment.
7. X-ray changes of the bones in the newborn with congenital syphilis may *not* be present up to four to eight weeks after birth. When present they are very helpful in the diagnosis but when absent do not rule out the disease.
8. Since IGM is made by the infant and also does not cross the placenta and since IGG crosses the placenta from mother to infant, use of FTA-abs-IGG and FTA-abs-IGM may be of great use to help distinguish between the true and false congenital lues when any doubt exists.

TWENTY-THIRD ANNUAL SYMPOSIUM ON TRAUMA

December 5 & 6, 1975

Harper Hospital, Second Floor Webber Wing
3990 John R Street, Detroit

Sponsored by the Michigan Committee on Trauma of the American College of Surgeons
and
Wayne State University, Department of Surgery

Lectures and Panel Discussions

Friday, 8:45 a.m. — "Trauma to the Abdomen"
Friday, 2:00 p.m. — "Trauma to the Neck and Chest"
Saturday, 8:30 a.m. — "Shock and Metabolism in the Acutely Injured"

Postgraduate Courses

Friday, 8:45 a.m. — "Trauma and Surgery of the Hand"
Friday, 2:00 p.m. — "Burns & Plastic Surgical Problems"
Saturday, 8:30 a.m. — "Orthopedic and Pediatric Problems"

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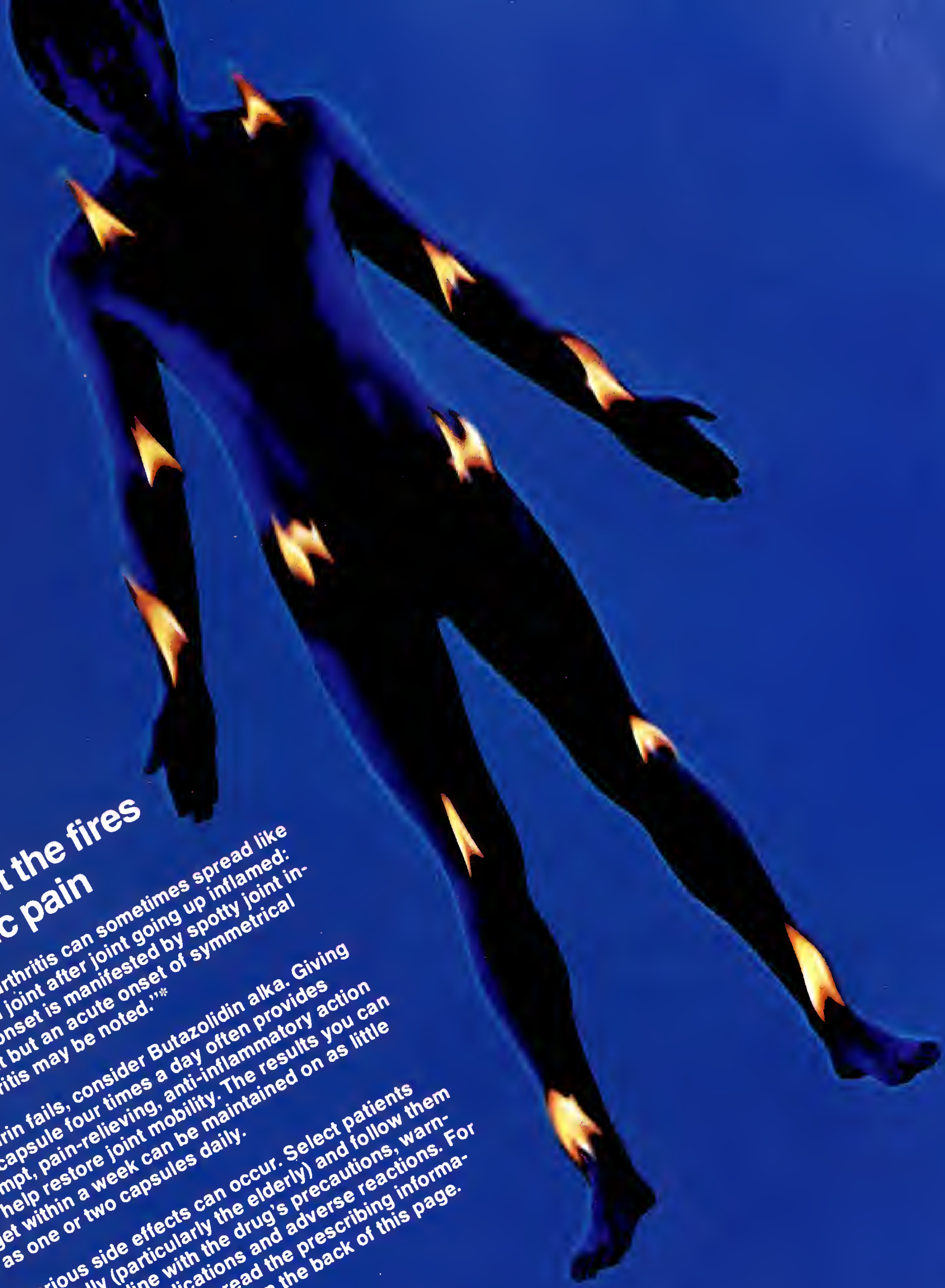

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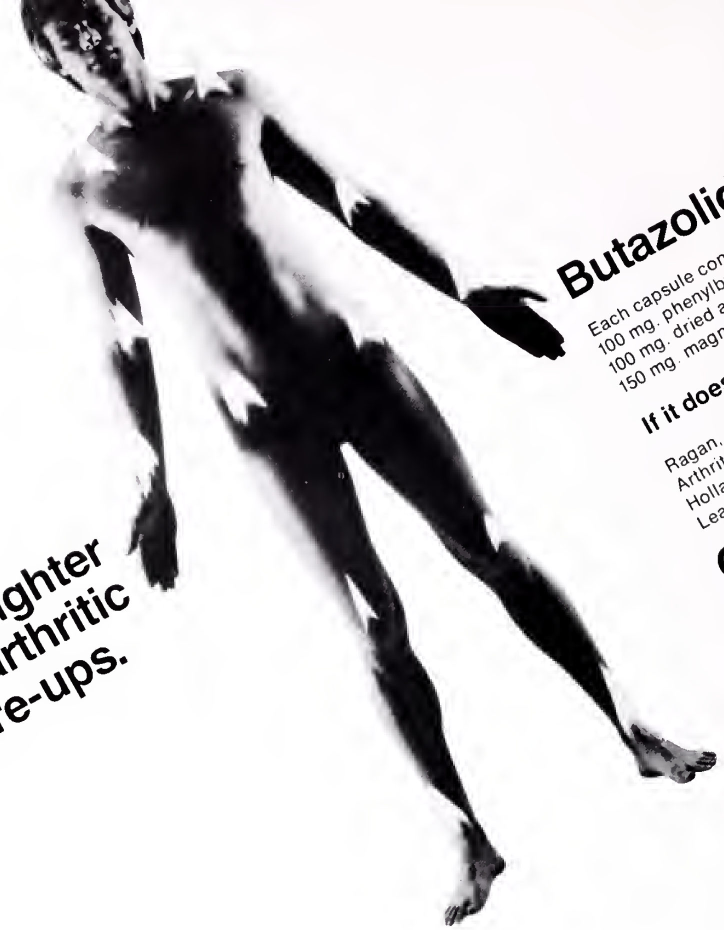

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Ragan, C.: The Clinical Picture of Rheumatoid Arthritis, in Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335.

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Warnings: Age, weight, dosage, duration of therapy, existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

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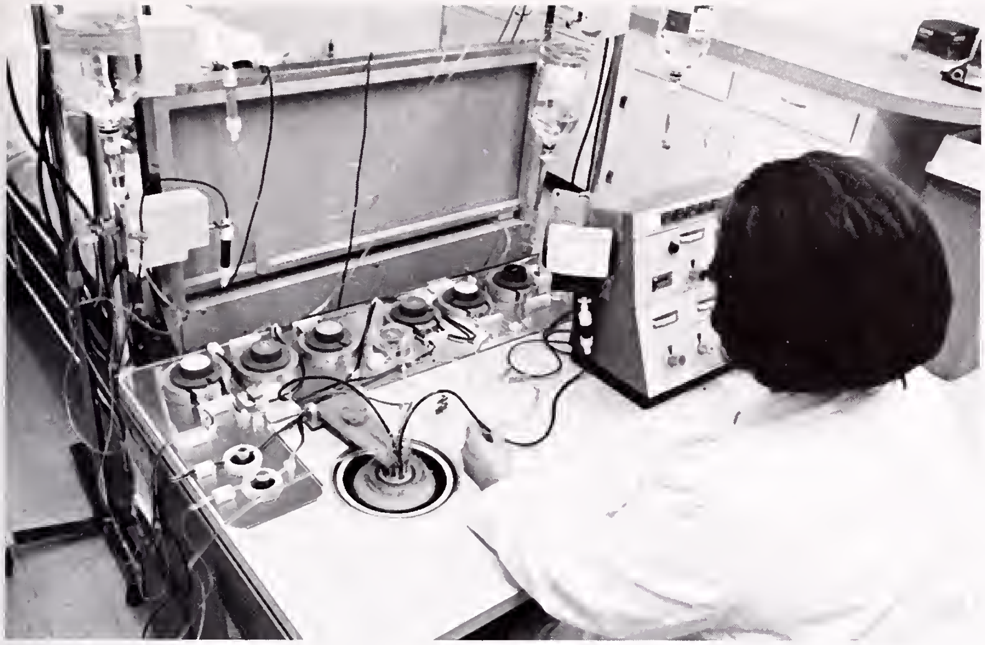

Figure 1. Shows a donor attached to the IBM cell separator.

Granulocyte Transfusions Collected From Normal Donors

By T. Buroker, DO
Sr. M. Lefevre, MT, (ASCP)
Michael K. Samson, MD
Michael D. Henderson, MD
V. K. Vaitkevicius, MD FACP
Detroit

Abstract

Granulocyte transfusions have been reported to be beneficial to granulocytopenic infected patients.

Twenty-two granulocyte transfusions were administered to six patients. The cells were harvested by an IBM cell separator. All donors and patients were evaluated for compatibility (as defined by absence of recipient leukoagglutinins and lymphocytoxic antibodies against donor leukocytes).

The mean number of leukocytes and granulocytes administered per transfusion was 1.10×10^{10} and $.7 \times 10^{10}$, respectively.

In patients who demonstrated no ABO incompatibility or leukoagglutinins to the donor cells, the mean leukocyte increment and corrected PMN increment were $628/mm^3$ and $1060/mm^3$, respectively. In addition, the mean one hour post transfusion PMN recovery was 28%.

The granulocyte collection efficiency for the cell separator was 18%.

Four of the six patients demonstrated clinical benefits from the granulocyte transfusions.

Introduction

With the continuing development and use of new and effective antitumor agents, one of the most severe problems encountered in clinical oncology is the granulocytopenic infected patient.

This paper is supported in part by Grants CA 07177-11 and T12 CA 08096-08 from the National Cancer Institute, United States Public Health Service. Address for reprints: T. Buroker, DO, Milton A. Darling Memorial Center, 4160 John R Street, Detroit, Michigan 48201.

Doctor Buroker, Doctor Samson and Doctor Henderson are assistant professors of oncology at Wayne State University School of Medicine where Sr. LeFevre is head medical technologist in the Leukapheresis Laboratory. Doctor Vaitkevicius is professor and chairman, WSU Department of Oncology. The authors also are associated with the Milton A. Darling Memorial Center of the Michigan Cancer Foundation, Detroit.

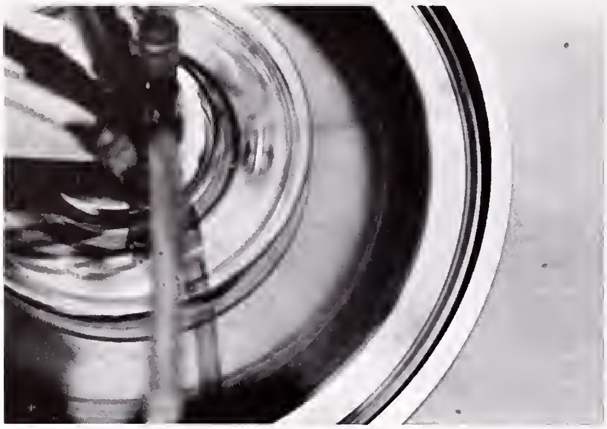

Figure 2. Shows the top of the centrifuge bowl with the separation of the blood into plasma (inner zone), buffy coat (middle zone), and red blood cells (outer zone).

Bodey of M. D. Anderson Hospital looked at the amount of time leukemia patients with granulocytopenia will harbor an infection.[1] He demonstrated that patients with a white blood count below 100/cmm will have an infection greater than 50% of the time during their period of leukopenia.

It has been shown that to elevate the granulocyte count of a granulocytopenic patient by 1000 cells/cmm, it would require the transfusion of approximately 40 units of whole blood.[2] Other investigators have also demonstrated that to alter the level of granulocytopenia significantly requires the administration of 1 x 10^{10} cells.[3]

Reports of granulocyte replacement therapy first appeared in the literature in 1934 and subsequent reports have appeared occasionally until 1960.[4] The main obstacle encountered in this type of therapy in the past has been the inability to harvest an adequate number of granulocytes for transfusion.

At the present time, there are two commonly used methods of obtaining granulocytes. The first is known as filtration leukapheresis, a technique whereby a donor's blood is passed through nylon wool filters to which the granulocytes adhere. The second method, which is employed at Wayne State University, is continuous flow centrifugation using the IBM cell separator. The IBM cell separator was developed in 1963 by Drs. Freireich and Judson, then at the National Cancer Institute. The cell separator harvests granulocytes by means of intermittent bleeding and continuous centrifugation.

(Continued page 726)

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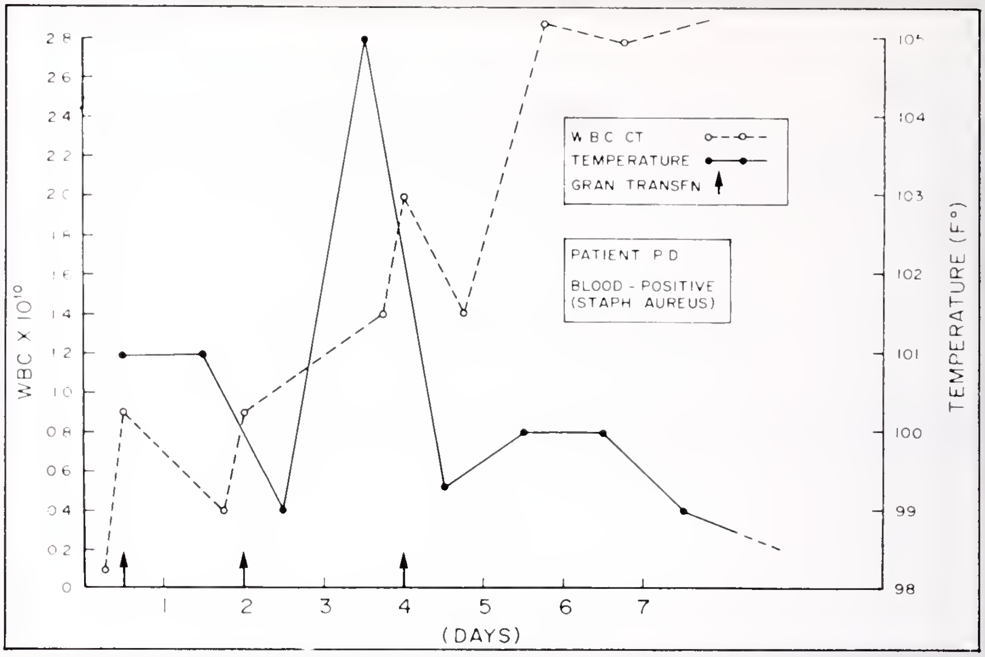

Figure 3. Plots the temperature and WBC level in a patient with lung cancer who had S. aureus bacteremia.

Materials and Methods

The mechanics of the cell separator have been described previously in the literature.[5,6] The principle utilized by this machine consists of continuous-flow centrifugation to separate blood into its three components: plasma, buffy coat, and red blood cells. By means of peristalic pumps **(Figures 1 and 2),** the white blood cells are collected from the buffy coat while the red blood cells and plasma are returned to the donor.

We wish to report the data obtained whereby 22 granulocyte transfusions were administered to six patients.

Criteria used to determine candidates for granulocyte transfusions consist of 1) the presence of a malignancy, 2) a granulocyte count less than 500/cmm, 3) evidence of an active infection unresponsive to an appropriate antibiotic program.

Preliminary testing of all patients and donors included 1) typing for red cell compatibility, 2) screening for Australia antigen and 3) serology. Each donor and recipient was also typed for human lymphocytic antigens (HL-A) and compared for the number of antigen similarities. In addition, every recipient was examined for the presence of leukocyte antibodies prior to the administration of each granulocyte transfusion.

Results

Table 1 summarizes the data obtained when the granulocytes were collected from 17 normal

TABLE 1

Summary of Granulocyte Transfusions Collected From Normal Donors

Patient	Number of Transfusions	Average Number of Leukocytes Collected/ Patient	Average Number of Granulocytes Collected/ Patient	Absolute Average Leukocyte Change/ Transfusion	Average Corrected P M N Increment/ Transfusion	Average P M N % Recovery/ Transfusion	Average Efficiency of Leukocytes Collected/ Patient	Average Efficiency of Granulocyte Collection/ Patient
E. B.	6	1.3 × 10^{10}	.82 × 10^{10}	734/mm^3	1480/mm^3	37%	22%	21%
P. D.	3	1.16 × 10^{10}	.83 × 10^{10}	633/mm^3	1088/mm^3	28%	21%	17%
L. H.	4	1.22 × 10^{10}	.85 × 10^{10}	300/mm^3	363/mm^3	21%	24%	21%
N. J.	5	1.15 × 10^{10}	.87 × 10^{10}	500/mm^3	400/mm^3	10%	18%	19%
F. P.	2.	.77 × 10^{10}	.43 × 10^{10}	650/mm^3	522/mm^3	13%	12%	10%
M. Z.	2	.59 × 10^{10}	.44 × 10^{10}	950/mm^3	2511/mm^3	63%	13%	20%
TOTALS	22	6.16 × 10^{10}	4.24 × 10^{10}	3767/mm^3	6364/mm^3	172%	110%	108%
AVERAGE	3.3	1.10 × 10^{10}	.70 × 10^{10}	628/mm^3	1060/mm^3	28%	18%	18%

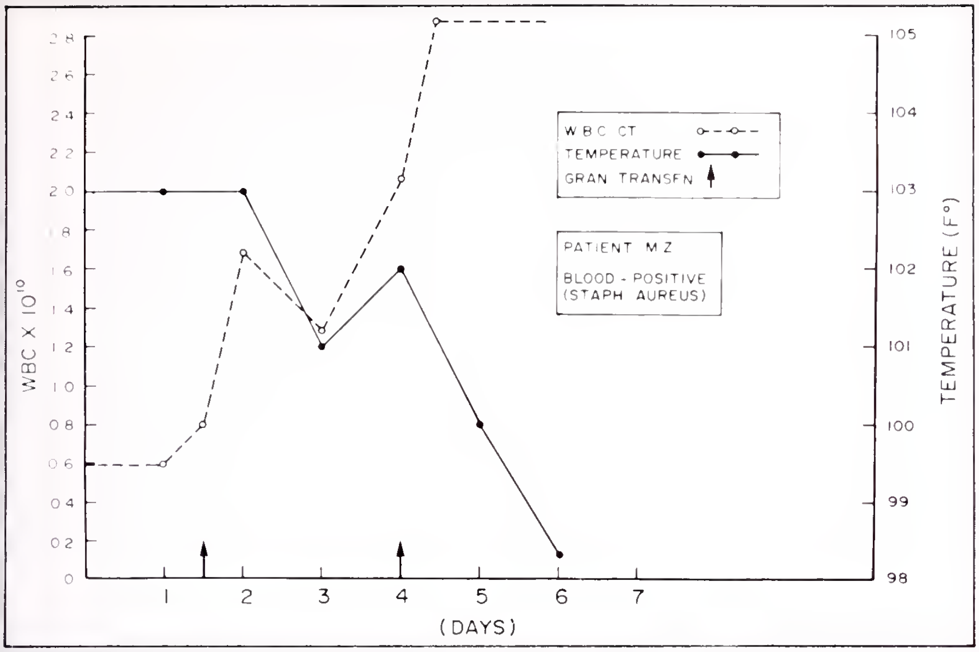

Figure 4. Plots the temperature and WBC level in a patient with breast cancer who had S. aureus bacteremia.

donors. The average number of leukocytes collected per procedure was 1.10 x 10^{10}. The average number of granulocytes collected per procedure was .70 × 10^{10}. The change in the pre- and one-hour post-transfusion white blood count level was 628/cmm. The corrected PMN increment, which is the change in the recipient's pre- and one-hour post-transfusion granulocyte level as it related to his body surface and the number of cells transfused, was 1060/cmm. The average PMN recovery, as calculated from the change in the pre- and one-hour post-transfusion granulocyte level as it relates to the number of granulocytes transfused, was 28%. The average efficiency of the cell separator in collecting granulocytes was 18%.

Four of the six patients demonstrated clinical benefits from the granulocyte transfusions. **Figures 3 and 4** depict the change in the temperature curve as the level of leukopenia recovers in two patients who responded to the granulocyte transfusions. Both patients recovered from their bacteremia.

Figure 5 compares the one hour percent recovery of granulocytes as it relates to the number of HL-A matches between donor and recipient. It can be seen that the recovery is markedly affected by the degree of histocompatibility between donor and recipient. It is shown in **Figure 5** that better matches resulted in higher percent PMN recovery. The several low yields shown in the patients, who had two antigen matches with their donors, were thought to be secondary to minor red cell incompatibilities that were demonstrated prior to the transfusions being given.

Table 2 gives additional data on the 25 procedures that were performed. Three transfusions were not administered because the patient died on the day of the leukapheresis. It can be seen that it requires the processing of approximately nine liters of the donor's blood over a period of four hours to obtain the desired number of cells.

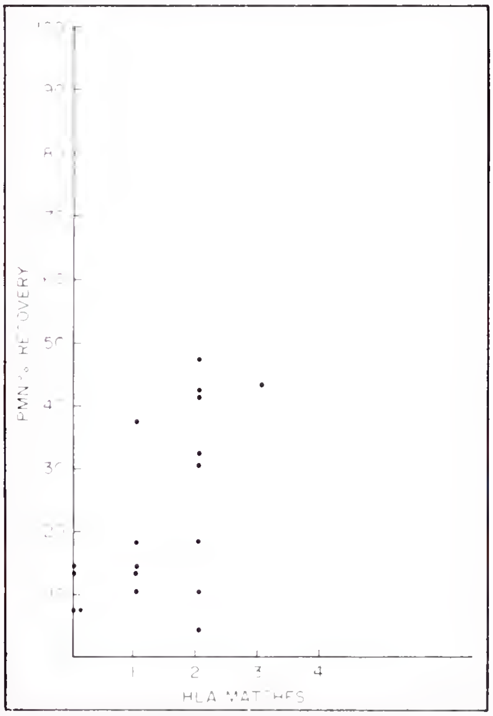

Figure 5. Compares the percent 1 hour PMN recovery as it relates to HL-A matches between donor and recipient.

TABLE 2
Leukapheresis Data of 17 Normal Donors

Donor	Number of Procedures	Total Hours of Leukapheresis	Period of Study (Days)	Total Bld. Vol. Processed (Liters)	Average Amount Bld. Process/Run
E. Z.	2	6.0	2	20.0	10.0
S. B.	4	11.5	4	38.7	9.7
D. B.	3	8.75	3	27.2	9.1
E. D.	1	3.5	1	10.3	10.3
Y. S.	1	3.5	1	10.9	10.9
H. D.	1	3.5	1	10.0	10.0
H. B.	2	5.0	2	16.3	8.2
D. B.	1	2.5	1	9.1	9.1
T. M.	1	2.0	1	8.3	8.3
L. M.	1	3.0	1	10.1	10.1
L. H.	2	5.5	2	19.6	9.8
L. B.	1	2.5	1	8.2	8.2
P. G.	1	2.0	1	7.6	7.6
R. N.	1	4.0	1	10.0	10.0
A. N.	1	4.5	1	7.7	7.7
R. K.	1	3.0	1	10.0	10.0
L. K.	1	3.5	1	10.0	10.0
TOTALS	25	74.25	25	234.0	159.0
AVERAGES	1.5	4.4	1.5	13.8	9.4

The safety of the cell separator has been previously described by other investigators.[7] **Table 3** summarizes the hematological changes of the 17 donors who underwent leukapheresis. It is evident that no significant changes occurred in any measurable parameter.

Summary

The recovery of our patients from drug-induced leukopenias was probably not significantly accelerated by the granulocyte transfusions. However, the white cell transfusions were felt to facilitate handling of the infection during the period of leukopenia. Although the information obtained here concerns only a small number of patients, we feel that granulocyte replacement therapy, when the cells are harvested with a cell separator, is an effective and safe modality to be employed in the neutropenic cancer patient with an infection.

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3. Freireich EJ et al: Transfusion of granulocytes from donors with chronic myelocytic leukemia to leukopenic recipients. *J Clin Invest 41:*1359, 1962.

(Continued on page 730)

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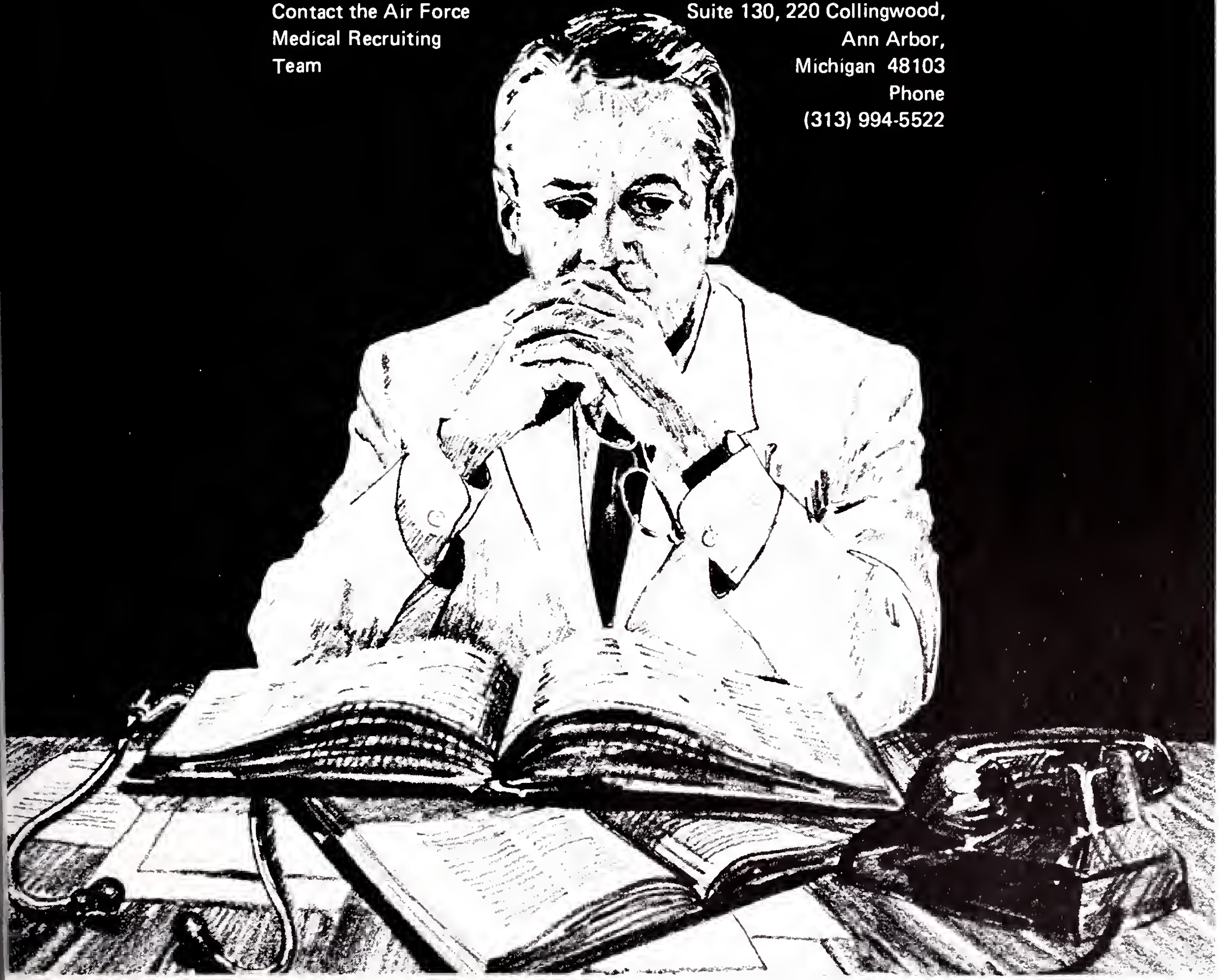

TABLE 3
Averages of Hematological Studies of 17 Normal Donors Who Underwent Leukapheresis

	First Donation Only			All Donations		
	Before	After	% Change	Before	After	% Change
Hemoglobin (g/100 ml)	13.9	12.7	9	13.6	12.3	10
Hematocrit (% vol.)	42.3	38.6	9	41.7	37.8	9
Leukocyte Count (/cmm)	6.387	5,918	7	6,172	5,838	5
Platelet Change (/cmm)	199,941	175,618	12	204,455	179.283	12

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Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

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November 30–December 5

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Monday-Wednesday, Dec. 1-3/7:30-9:00 AM (4½ hour, 3-day course: $45)

1. Dermatology for Non-Dermatologists
2. Evaluation of the Unconscious Patient
3. Hyperlipidemia
4. Infectious Diseases in Children
5. Management of Adolescent Problems
6. Newer Antibiotics
7. Newer Concepts of Family Planning
8. Office Management of Sexual Difficulties
9. Peripheral Vascular Disease—Diagnosis and Treatment
10. Pulmonary Function Tests and Blood Gases

Monday-Wednesday, Dec. 1-3 (Numbers 1-10)
1st Choice # ____; 2nd Choice # ____; 3rd Choice # ____

Monday-Wednesday, Dec. 1-3/10:30 AM-Noon (4½ hour, 3-day course: $45)

11. Acid-Base, Fluid and Electrolyte Balance
12. Advanced Electrocardiography
13. Critical Patients—Critical Decisions
14. Normal and Abnormal Uterine Bleeding
15. Office Management of Anorectal Disorders
16. Office Practice of Gynecology
17. Physicians' Marriages
18. Special Problems of Child Abuse
19. Surgical Lesions of the Intestines—Diagnosis and Treatment
20. Treatment of Common Pediatric Allergies

Monday-Wednesday, Dec. 1-3 (Numbers 11-20)
1st Choice # ____; 2nd Choice # ____; 3rd Choice # ____

Thursday-Friday, Dec. 4-5/7:30-10:30 AM (6 hours for total course; 3 hours on Thursday, 3 hours on Friday: $60)

21. Acid-Base, Fluid and Electrolyte Balance (repeat)
22. Basic Electrocardiography
23. Birth Defects and Clinical Genetics
24. Dermatology for Non-Dermatologists (repeat)
25. Fetal Monitoring
26. Ophthalmoscopy for the Non-Ophthalmologist
27. Pediatric Cardiology
28. Pitfalls of Emergency Room X-Rays
29. Office Endocrinology
30. Immunology—1976
31. The Uterine Pap Smear

Thursday-Friday, Dec. 4-5 (Numbers 21-31)
1st Choice # ____; 2nd Choice # ____; 3rd Choice # ____

Offered Both Monday & Tuesday, Dec. 1 & 2/7:30 AM-Noon (4½-hour course: $45)

32. Basic Life Support—Cardiopulmonary Resuscitation (Dec. 1) ______
33. Basic Life Support—Cardiopulmonary Resuscitation (Dec. 2) ______

Wednesday-Friday, Dec. 3-5/9:00 AM-Noon (9-hour course: $90)

34. Advanced Life Support—Cardiopulmonary Resuscitation. (Prerequisite: Basic Life Support Course) (Dec. 3-5) ______

Courses of the AMA Committee on the Medical Aspects of Sports (Each a 3-hour course: $30)

Monday, Dec. 1/7:30-9:00 AM & 10:30-Noon
35. The Physical Exam ______

Tuesday, Dec. 2/7:30-9:00 AM & 10:30-Noon
36. The Oriental Arts (Karate, Judo, Yoga) ______

Wednesday, Dec. 3/7:30-9:00 AM & 10:30-Noon
37. Emergency Care on the Field ______

Thursday, Dec. 4/7:30-10:30 AM
38. Wrestling ______
39. Aquatic Sports ______

Friday, Dec. 5/7:30-10:30 AM
40. Rehabilitation ______

Tuesday-Wednesday, Dec. 2-3/7:30-10:30 AM (6 hours for total course; 3 hours on Tuesday, 3 hours on Wednesday: $60)
41. Writing for Scientific Journals ______

LUNCHEON ROUND TABLES

(Held in Hilton Hawaiian Village Long House Room, luncheon round tables are jointly sponsored by the AMA Auxiliary and AMA Council on Scientific Assembly. Cost: $10.00 each.)

Tuesday, December 2 (12:15-1:45 PM) • Topic—Ancient Polynesian Medicine ______

Thursday, December 4 (12:15-1:45 PM) • Topic—Delhi Belly, Gyppy-Tummy, and Other Diseases of Travelers ______

General Registration

______ Non-member physicians: $35

______ Guests of non-members: $10

______ Foreign M.D.'s: no fee

______ AMA members and their guests: no fee

______ Medical students, interns and residents: no fee

My remittance of $ ______ is enclosed. Make check or money order payable to the American Medical Association. Payment must accompany registration.

Please print

Name ______
(Each physician must register in his own name)

Office Address ______

City/State/Zip ______

I am a member of the AMA through the following State Medical Association or government service ______

Office Phone No. ______

☐ Send travel information; or call toll-free to: (800) 621-1046, except in Alaska and Hawaii; in Illinois call (312) 782-3462

Return this form today to AMA's Dept. of Membership Statistics, 535 N. Dearborn St., Chicago, IL 60610

Here is New 'No Smoking' Sign For Doctors' Offices

A new version of the popular and successful MSMS "No Smoking" card is now available to MSMS members through this issue of *Michigan Medicine.*

On this page, below, and on the following page are two sizes, one for table display and the other for wall mount. They are designed to fit standard 5 × 7 and 8 × 10 frames.

The first MSMS "No Smoking" sign, which actually read, "Thank You for Not Smoking," was distributed to all MSMS members via the July, 1972 *Michigan Medicine.* Thousands have been reproduced since and sent on request to churches, schools, industries, civic groups, clubs and even private citizens who wanted to post them in their homes.

The idea was originated by Robert Burrell, MD, Kalamazoo, and soon was seen on identical signs sponsored by other health organizations which appeared periodically following the publication of that July *Michigan Medicine.*

The impetus for the no smoking public relations campaign comes from a long-standing MSMS policy that members be urged to avail themselves of all opportunities to lead or participate in the dissemination of information regarding the hazards of smoking.

We'd like to suggest, Doctor, that you remove this card from your magazine and post it in your office.

This sign will stand alone on reception room desk, if folded across center of page. It and sign on following page also will fit standard frames.

Caution!

Your smoking
is hazardous
to my health.

Provided by
Michigan State Medical Society

Caution!

Your smoking is hazardous to my health.

Provided by
Michigan State Medical Society

Natural balance
doesn't always come naturally

Big Balanced Rock, Chiricahua Mountains, Arizona (approx 1,000 tons)

Found useful in the management of vertigo* associated with seases affecting the vestibular system.

Can relieve nausea and vomiting often associated with vertigo.*

Usual adult dosage for Antivert/25 for vertigo:* one tablet t.i.d.

Also available as Antivert (meclizine HCl) 12.5 mg. scored blets, for dosage convenience and flexibility.

Antivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for ıusea, vomiting and dizziness associated with motion sickness.

IEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified he indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with notion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further nvestigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done, therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer

A division of Pfizer Pharmaceuticals
New York, New York 10017

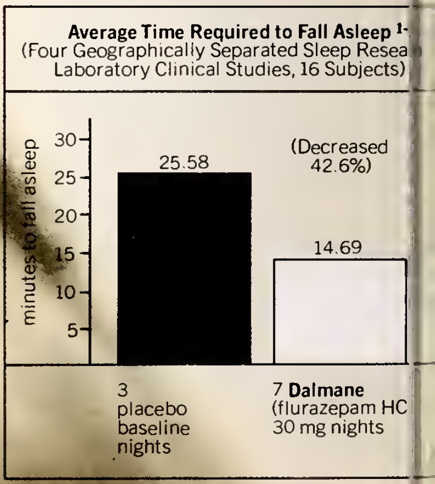
Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*

AWAKE
HOURS
1
2

How do you handle trouble falling asleep?

With Dalmane® (flurazepar HCl), results are highly predictable.

As demonstrated below, Dalm induces sleep within 17 minutes, average:[1-4]



And for those with trouble taying asleep or sleeping ng enough…

…sleep research laboratory inical studies prove: Dalmane ecreases number of nighttime wakenings and increases total eep time.[5]

Dalmane (flurazepam HCl) relatively safe, seldom auses morning "hang-over"

Dalmane is generally well lerated. The usual adult dose of) mg should initially be lowered to mg for the elderly and ebilitated, to help preclude versedation, dizziness or ataxia. ppraisal of possible risks is ggested before prescribing.

EFERENCES:

Karacan I, Williams RL, Smith JR: ne sleep laboratory in the investigation sleep and sleep disturbances. Scientific hibit at the 124th annual meeting of the nerican Psychiatric Association, ashington DC, May 3-7, 1971

Frost JD Jr: A system for automati- lly analyzing sleep. Scientific exhibit at e 24th annual Clinical Convention of the nerican Medical Association, Boston, ov 29-Dec 2, 1970; and at the 42nd nual scientific meeting of the Aerospace edical Association, Houston, Apr 26-29, 71

Vogel GW: Data on file, Medical Depart- ent, Hoffmann-La Roche Inc., Nutley NJ

Dement WC: Data on file, Medical epartment, Hoffmann-La Roche Inc., itley NJ

Data on file, Medical Department, offmann-La Roche Inc., Nutley NJ

efore prescribing Dalmane (flurazepam Cl), please consult complete product formation, a summary of which follows:

dications: Effective in all types of insomnia aracterized by difficulty in falling asleep, equent nocturnal awakenings and/or early orning awakening; in patients with recurring somnia or poor sleeping habits; and in ute or chronic medical situations requiring stful sleep. Since insomnia is often transient d intermittent, prolonged administration is nerally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

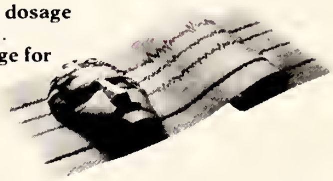
Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

You can depend on the efficacy of

Dalmane®

(flurazepam HCl)

One 30-mg capsule *h.s.*— usual adult dosage (15 mg may suffice in some patients).
One 15-mg capsule *h.s.*— initial dosage for elderly or debilitated patients.



for insomnia

Objectively proved in the sleep research laboratory:

- **sleep within 17 minutes, on average**
- **sleep with fewer nighttime awakenings**
- **sleep for 7 to 8 hours, on average,**

with a single *h.s.* dose

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Opinion & Dialogue

Should a specially prepared package insert be made available to patients?

Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration

The idea of a so-called patie
package insert has been around
a long time. Many physicians alre
use written instruction sheets to
provide patients with informatior
about the drugs they are taking.
some physicians give verbal instr
tions; but in too many instances
these are what I call eye-glazing
ercises. I have seen patients sit w
glazed eyes listening to a rapid-fi
lecture by a hurried physician wh
has 20 people out in his waiting
room. These patients aren't giver
sufficient understanding and the
fore do not follow instructions. S
think the idea of an official packa
insert for patients is a good one.
Perhaps we should really think of
this kind of information simply as
extension of drug labeling.

The benefits of patient involveme

Many physicians may not re
ize how frequently a patient obta
his drug information from Aunt
Tillie or the next door neighbor.
this information is almost alway
bad or irrelevant to the case at ha
Furthermore, the incentive to go
along with a prescribed program
slim if the only reading matter th
patient receives, along with his p
scription, is a bill.

As an educator I am impres
by the principle that the best way
get someone to do something is t
involve him in the process. So th

Dr. James H. Sammons
Executive Vice President
of the American
Medical Association

I think there are advantages
well as some real disadvantages
a patient package insert. When y
begin to use semi-medical or me
cal terms to describe complicati
or possible sequelae of disease o
treatment, you may frighten the
tient—particularly since the mor
highly sophisticated patient is no
the one who is going to read the i
sert. The patient who will read it
the one most susceptible to frigh
and confusion by the language.

On the positive side, a pack
insert will probably give the patie
better insight into why he is bein
treated the way he is, and it may
give the physician a little bit mor
time. But it does not remove fror
the physician the need or obligat
to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should b
warned of the possibility of serio
side reactions—to know what the
real dangers are. But it doesn't d
bit of good to indicate that a pati
on oral penicillin may develop a
rash, itching, or a drop in blood
pressure. Or that he may faint. I
think the real danger is that frigh
engendered by the insert may po
sibly outweigh the potential gooc

main purpose of drug information for the patient is to get his cooperation in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass information from physicians, medical societies, the pharmaceutical industry and centers of medical learning. The ultimate responsibility for uniform labeling must, however, rest with the Food and Drug Administration. There is nothing wrong with this agency saying, "this information is generally agreed upon and therefore it should be used," as long as our process for getting the information is sound.

Distribution of the information s a problem. In great measure it would depend on the medication in question. For example, in the case of an injectable long-acting progesterone, we would think it mandatory o issue two separate leaflets—a short one for the patient to read before getting the first shot and a long one to take home in order to make a decision about continuing therapy. n this case, the information might be put directly on the package and not removable at all. But for a medication like an antihistamine this nformation might be issued separately, thus giving the physician the option of distribution. This could preserve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socioeconomic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

Only the doctor can remove that fear by 20 or 30 minutes of conversation.

I'm not suggesting that we withhold any information from the patient because, first of all, it would be totally dishonest and secondly, it would defeat the very purpose of the insert. I do think that a patient on the irth control pill should know about he incidence of phlebothrombosis.

If you're going to tell a patient he incidence of serious adverse rections, then you have to tell him hat a concerned medical decision was made to use a particular mediation in his situation after careful onsideration of the incidence of omplications or side effects.

motionally unstable patients pose special problem

There are patients who, beause of severe emotional problems, ould not handle the information ontained in a patient package inert. Yet if we are going to have a ackage insert at all, we just can't ave two inserts. I think we might imply have to tell the families of hese patients to remove the insert om the package.

egal implications of the patient ackage insert

Just what effect would a patient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert

The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

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When **impotence** *due to*

androgenic deficiency

is driving them apart

Android®-5 MUQETS BUCCAL Tabs

Android®-10 ORAL Tabs

Android®-25 ORAL Tabs

Methyltestosterone N.F. — 5, 10, 25 mg.

DESCRIPTION: Methyltestosterone is 17β-Hydroxy-17-Methylandrost-4-en-3-one. **ACTIONS:** Methyltestosterone is an oil soluble androgenic hormone. **INDICATIONS:** In the male: 1. Eunuchoidism and eunichism. 2. Male climacteric symptoms when these are secondary to androgen deficiency. 3. Impotence due to androgenic deficiency. 4. Postpuberal cryptorchidism with evidence of hypogonadism. Cholestatic hepatitis with jaundice and altered liver function tests, such as increased BSP retention, and rises in SGOT levels, have been reported after Methyltestosterone. These changes appear to be related to dosage of the drug. Therefore, in the presence of any changes in liver function tests, drug should be discontinued. **PRECAUTIONS:** Prolonged dosage of androgen may result in sodium and fluid retention. This may present a problem, especially in patients with compromised cardiac reserve or renal disease. In treating males for symptoms of climacteric, avoid stimulation to the point of increasing the nervous, mental, and physical activities beyond the patient's cardiovascular capacity. **CONTRAINDICATIONS:** Contraindicated in persons with known or suspected carcinoma of the prostate and in carcinoma of the male breast. Contraindicated in the presence of severe liver damage. **WARNINGS:** If priapism or other signs of excessive sexual stimulation develop, discontinue therapy. In the male, prolonged administration or excessive dosage may cause inhibition of testicular function, with resultant oligospermia and decrease in ejaculatory volume. Use cautiously in young boys to avoid premature epiphyseal closure or precocious sexual development. Hypersensitivity and gynecomastia may occur rarely. PBI may be decreased in patients taking androgens. Hypercalcemia may occur, particularly during therapy for metastatic breast carcinoma. If this occurs, the drug should be discontinued. **ADVERSE REACTIONS:** Cholestatic jaundice • Oligospermia and decreased ejaculatory volume • Hypercalcemia particularly in patients with metastatic breast carcinoma. This usually indicates progression of bone metastases • Sodium and water retention • Priapism • Virilization in female patients • Hypersensitivity and gynecomastia. **DOSAGE AND ADMINISTRATION:** Dosage must be strictly individualized, as patients vary widely in requirements. Daily requirements are best administered in divided doses. The following is suggested as an average daily dosage guide. **In the male:** Eunuchoidism and eunuchism, 10 to 40 mg.; Male climacteric symptoms and impotence due to androgen deficiency, 10 to 40 mg.; Postpuberal cryptorchism, 30 mg. **HOW SUPPLIED:** 5, 10, 25 mg. in bottles of 60, 250.

Write for Literature and Samples

BROWN THE BROWN PHARMACEUTICAL CO., INC.

REFER TO PDR

2500 West Sixth Street, Los Angeles, California 90057

Monthly Surveillance Report

Cases of Certain Diseases
Reported to the Michigan Department of Public Health
For the Four Week Period Ending Sept. 26, 1975

	1975 This 4-Week Period	1974 Same 4-Week Period	1975 Total To Above Date	1974 Total Same Date	Total Cases for 1974
Rubella	20	35	1,419	1,211	1,388
Cong. Rubella Syndrome	0	0	1	0	1
Measles	8	46	3,016	1,950	2,365
Whooping Cough	16	14	65	75	104
Diphtheria	0	0	1	0	0
Mumps	94	80	8,086	5,461	7,230
Scarlet Fever & Strep Sore Throat	1,036	730	17,112	26,415	31,802
Tetanus	0	0	0	3	6
Poliomyelitis (paralytic)	0	0	0	1	2
Hepatitis	235	300	2,157	2,787	3,599
Salmonellosis (other than S. typhi)	84	86	627	785	1,001
Typhoid Fever (S. typhi)	0	1	5	7	11
Shigellosis	77	153	572	1,047	1,436
Aseptic Meningitis	83	24	177	111	162
Encephalitis	33	8	80	51	69
Meningococcic Meningitis	5	4	64	39	54
H. Influenza Meningitis	8	8	99	91	121
Tuberculosis	71	116	871	829	1,431
Syphilis	106	206	1,235	2,102	2,659
Gonorrhea	2,831	2,838	23,548	23,772	32,152

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

Information can be supplied by the local health department on the local incidence of disease.

Maurice Reizen, M.D., Director
Michigan Department of Public Health

Anabolic Stimulant Increased Muscular Tone Osteoporosis

EACH ANDROID-G TABLET CONTAINS:

Ethinyl Estradiol	0.005 mg
Methyltestosterone	1.25 mg
L-lysine	100 mg
Nicotinic Acid	12.5 mg
Iron (from Ferrous Sulfate)	2.82 mg
Vitamin A	2,500 U.S.P. Units
Vitamin D	250 U.S.P. Units
Thiamine Mononitrate	2.5 mg
Riboflavin	2.5 mg
Ascorbic Acid	25.0 mg
Folic Acid	0.1 mg
Vitamin B-12	1.5 mcg
Methionine	12 mg
Choline Bitartrate	15 mg
Inositol	10 mg
Calcium Pantothenate	2.5 mg
Pyridoxine	0.25 mg
Copper (from Copper Sulfate)	0.25 mg
Zinc (from Zinc Oxide)	0.25 mg
Iodine (from Potassium Iodide)	0.075 mg
Calcium (from Dicalcium Phosphate)	72.5 mg
Phosphorus (from Dicalcium Phosphate)	55 mg
Potassium (from Potassium Sulfate)	2.5 mg
Manganese (from Manganese Sulfate)	0.5 mg
Magnesium (from Magnesium Sulfate)	0.5 mg

ACTION AND USES — DOSAGE: 1 tablet after breakfast and supper, or as required. In females, 3-week courses of therapy are recommended followed by a 1-week rest period. Withdrawal bleeding may occur during the rest period. **PRECAUTIONS:** Administer cautiously to female patients who tend to develop excessive hair growth or other signs of masculinization. **CONTRAINDICATIONS:** Patients in whom estrogen or androgen therapy should not be used, as in carcinoma of the breast, genital tract, or prostate, and in patients with a familial tendency to these types of malignancy. **AVAILABLE:** Bottles of 100 and 500 tablets. Rx only.

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BROWN THE BROWN PHARMACEUTICAL CO., INC.
2500 West Sixth Street, Los Angeles, California 90057

Android®-G
For a fuller, more active life!

In Memoriam

Vernon C. Abbott, MD
Pontiac

Vernon C. Abbott, MD, Pontiac surgeon for 50 years, died Sept. 10 at the age of 76. Doctor Abbott had been chief of staff at Pontiac General Hospital. He was a regional chairman of the American College of Surgeons' Committee on Trauma, fellow of the ACS; fellow of the American Association for the Surgery of Trauma, and past president of the Oakland County Medical Society. He was a graduate of the University of Michigan Medical School.

Cecil Akroyd, MD
Bloomfield Hills

Cecil Akroyd, MD, Bloomfield Hills, died Sept. 30 at the age of 62. Doctor Akroyd was affiliated with Mt. Carmel Mercy and Northwest Grace Hospitals and was a graduate of the Wayne State University School of Medicine.

Norman Brey, MD
Detroit

Detroit physician for 30 years, Norman Brey, MD, died Sept. 3 at the age of 58. Doctor Brey was past president of the Michigan Allergy Society and the medical staff of Providence Hospital, Southfield. He was a graduate of the Wayne State University School of Medicine.

J. B. Conti, MD
Petoskey

Long-time Petoskey family physician Joseph B. Conti, MD, died Aug. 26 at the age of 68. Doctor Conti was a fellow of the American Academy of Family Physicians, member of the national advisory board of the American Security Council and member of the American Academy of Retired Physicians. He was graduated from St. John's University and was former chief of staff at Lockwood-McDonald Hospital, Petoskey.

Fred L. Gray, MD
Grand Rapids

Grand Rapids obstetrician and gynecologist Fred L. Gray, MD, died Sept. 9 at the age of 62. Doctor Gray was a life fellow, American College of Obstetricians and Gynecologists. He was graduated from Vanderbilt University medical school and had the distinction of delivering the four children of President and Mrs. Gerald Ford.

Jack C. Griffith, MD
Battle Creek

Battle Creek neurosurgeon Jack Curtis Griffith, MD, died Sept. 30 at the age of 52. Doctor Griffith

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was a graduate of the University of Cincinnati Medical School. He was a fellow of the American College of Surgeons, member of several neurological and surgical societies, former medical consultant to the Calhoun County Bureau of Social Welfare and advisory board member to the Calhoun County cancer society.

Harry Lieffers, MD
Grand Rapids

Grand Rapids physician for more than 50 years, Harry Lieffers, MD, died Sept. 26 at the age of 85. Doctor Lieffers was a graduate of the Chicago School of Medicine and received the MSMS 50-year pin in 1967. He had been in practice from 1919 to 1973.

Ira I. Miller, MD
Ann Arbor

Psychoanalyst and associate professor of psychiatry at the University of Michigan, Ira I. Miller, MD, died Sept. 13 at the age of 50. Doctor Miller was training and supervision analyst of the Michigan Psychoanalytic Institute. He was twice named teacher of the year by fellow U-M faculty members. He was a graduate of the Louisiana State University medical school, member of the American Psychoanalytic Association and member of the Michigan Psychoanalytic Society.

Joseph Seltzer, MD
Southfield

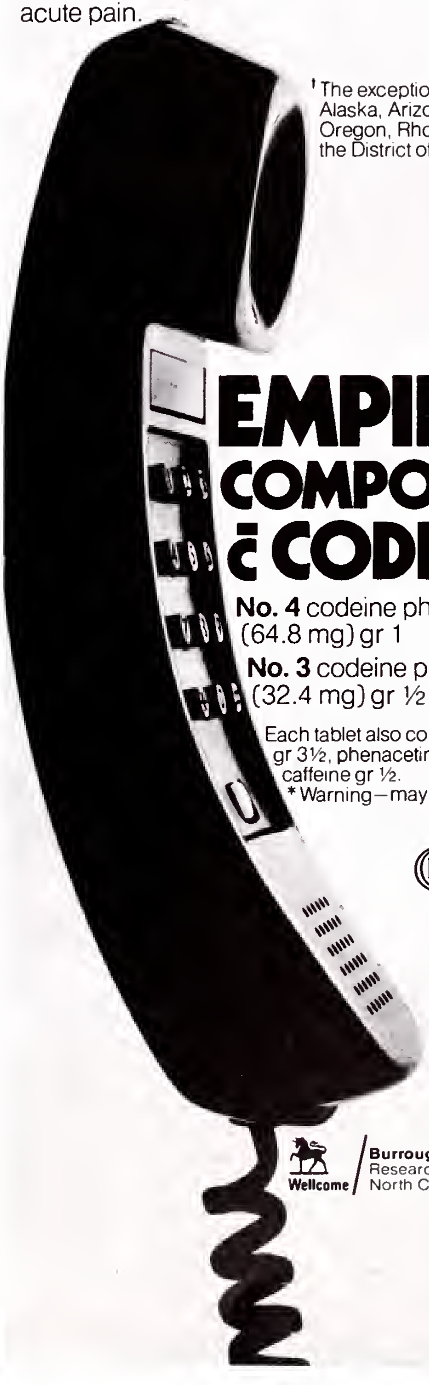
Southfield obstetrician and gynecologist Joseph Seltzer, MD, died Sept. 26 at the age of 53. He was a graduate of the University of Toronto medical school, a fellow of the American College of Obstetrics and Gynecology and past president of the Maimonides Medical Society. He was affiliated with Sinai, Crittenton General and Brent hospitals of Detroit.

Willard R. Vaughan, MD
Plainwell

Willard R. (Bob) Vaughan, MD, Plainwell family physician for 50 years, died Aug. 25 at the age of 88. Doctor Vaughan was a graduate of the University of Illinois medical school and was affiliated with Bronson Hospital in Kalamazoo and Plainwell Hospital. He was past president of the Kalamazoo Academy of Medicine and a member of the American Academy of Family Physicians.

Earl C. Wilson, MD
Harrison

Earl C. Wilson, MD, Harrison, died Sept. 17 at the age of 83. Doctor Wilson retired in 1973 after 45 years of practice. He formerly had practiced in Detroit and Pennsylvania. He was a graduate of the Detroit College of Medicine and was affiliated with Central Michigan Community Hospital in Mt. Pleasant.



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Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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President's Page

In Substitution Controversy

We Physicians Offer Only Chance For Quality Medicines for Our Patients

The bureaucratic intrusion into medical practice which resulted in the state's generic drug substitution law continues in the 1975 legislative session in Lansing. The newest ploy sponsored by self-styled consumer groups is HB 5325.

This bill, recently approved by the House Consumers Committee, would give pharmacists the power to make a generic substitution without the prior consent and knowledge of our patients, which the present law requires.

Under the new bill, if the patient requests a substitution, pharmacists are required to substitute. This is in contrast to the present law, which says the pharmacist "may" substitute at the patient's request.

The new bill follows the current law in allowing only the generic name on the prescription label, if the substitute has no brand name. The current law, however, also requires on the label both the name of the prescribed drug and the name of the dispensed drug.

HB 5325 was introduced because the 1974 generic drug law has been a dismal failure. Proponents of this legislation are attempting to make it easier for pharmacists to substitute. Usually consumer groups tell consumers to learn as much as possible about a product before they make a purchase. Know the manufacturer, package size, and so forth, say the consumerists. However, these self-appointed "champions of the people" now are saying that consumers do not need information about products so important as prescription medicines.

Brock E. Brush, MD
MSMS President

This has very little logic unless you consider that proponents of HB 5325 are trying anything they can think of to practice government-controlled medicine and make the generic drug law work. But, perhaps they have overlooked something very basic. Does the average consumer really want his or her pharmacist to substitute a different drug product?

The answer is found in two consumer surveys; one taken nationally and one conducted in Wisconsin. More than 70 percent of the participants in these surveys want their physicians to select the exact drug products they will receive. The same number do not want generic drugs substituted, even if these drugs cost less than those prescribed by their physicians. Quality — and not low prices — is what comes first in the consumer's mind when their health is on the line.

Therefore, we, as physicians, offer our patients the only opportunity for quality medicines. This is accomplished, as you know, by writing "dispense as written" or "DAW" on prescriptions for drugs where there are no acceptable generic substitutes. This is in keeping with our obligation to practice the best kind of medicine that we can in the interest of our patients. It is unfortunate, though, that we must defend our choice of prescription drugs simply because non-professionals want to intrude into the practice of medicine.

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"Probably" effective: For estrogen deficiency-induced osteoporosis, and only when used in conjunction with other important therapeutic measures such as diet, calcium, physiotherapy, and good general health-promoting measures. Final classification of this indication requires further investigation.

Contraindications: Short acting estrogens are contraindicated in patients with (1) markedly impaired liver function; (2) known or suspected carcinoma of the breast, except those cases of progressing disease not amenable to surgery or irradiation occurring in women who are at least 5 years postmenopausal; (3) known or suspected estrogen-dependent neoplasia, such as carcinoma of the endometrium; (4) thromboembolic disorders, thrombophlebitis, cerebral embolism, or in patients with a past history of these conditions; (5) undiagnosed abnormal genital bleeding.
Warnings: Estrogen therapy should not be given to women with recurrent chronic mastitis or abnormal mammograms except, if in the opinion of the physician, it is warranted despite the possibility of aggravation of the mastitis or stimulation of undiagnosed estrogen-dependent neoplasia.

The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, retinal thrombosis, cerebral embolism and pulmonary embolism). If these occur or are suspected, estrogen therapy should be discontinued immediately.

Estrogens may be excreted in the mother's milk and an estrogenic effect upon the infant has been described. The long range effect on the nursing infant cannot be determined at this time.

Hypercalcemia may occur in as many as 15 percent of breast cancer patients with metastases, and this usually indicates progression of bone metastases. This occurrence depends neither on dose nor on immobilization. In the presence of progression of the cancer or hypercalcemia, estrogen administration should be stopped.

A statistically significant association has been reported between maternal ingestion of diethylstilbestrol during pregnancy and the occurrence of vaginal carcinoma in the offspring. This occurred with the use of diethylstilbestrol for the treatment of threatened abortion or high risk pregnancies. Whether or not such an association is applicable to all estrogens is not known at this time. In view of this finding, however, the use of any estrogen in pregnancy is not recommended.

Failure to control abnormal uterine bleeding or unexpected recurrence is an indication for curettage.
Precautions: As with all short acting estrogens, the following precautions should be observed:

A complete pretreatment physical examination should be performed with special reference to pelvic and breast examinations.

To avoid prolonged stimulation of the endometrium and breasts in climacteric or hypogonadal women, estrogens should be administered cyclically (3 week regimen with 1 week rest period—withdrawal bleeding may occur during rest period).

Because of individual variation in endogenous estrogen production, relative overdosage may occur which could cause undesirable effects such as abnormal or excessive uterine bleeding, mastodynia and edema.

Because of salt and water retention associated with estrogenic anabolic activity, estrogens should be used with caution in patients with epilepsy, migraine, asthma, cardiac, or renal disease.

If unexplained or excessive vaginal bleeding should occur, reexamination should be made for organic pathology.

Pre-existing uterine fibromyomata may increase in size while using estrogens; therefore, patients should be examined at regular intervals while receiving estrogenic therapy.

The pathologist should be advised of estrogen therapy when relevant specimens are submitted.

Because of their effects on epiphyseal closure, estrogens should be used judiciously in young patients in whom bone growth is incomplete.

Prolonged high dosages of estrogens will inhibit anterior pituitary functions. This should be borne in mind when treating patients in whom fertility is desired.

The age of the patient constitutes no absolute limiting factor, although treatment with estrogens may mask the onset of the climacteric.

Certain liver and endocrine function tests may be affected by exogenous estrogen administration. If test results are abnormal in a patient taking estrogen, they should be repeated after estrogen has been withdrawn for one cycle.
Adverse Reactions: The following adverse reactions have been reported associated with short acting estrogen administration:
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If the patient has not menstruated within the last two months or more, cyclic administration is started arbitrarily. If the patient is menstruating, cyclic administration is started on day 5 of bleeding. If breakthrough bleeding (bleeding or spotting during estrogen therapy) occurs, increase estrogen dosage as needed to stop bleeding. In the following cycle, employ the dosage level used to stop breakthrough bleeding in the previous cycle. In subsequent cycles, the estrogen dosage is gradually reduced to the lowest level which will maintain the patient symptom free.

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MEETINGS

Dec. 17 – The Council, MSMS headquarters, contact: Warren F. Tryloff, director

Dec. 31 – December seminar, Michigan Society of Pathology, at the U-M, contact: Robert F. Hendrix, MD, Department of Pathology, University of Michigan, Ann Arbor, 48104

Jan. 13-15 – Postgraduate course, "Electrocardiographic Diagnosis," for family physicians and internists, Towsley Center, University of Michigan Medical Center*

Jan. 19-23 – Family Practice Review I, cosponsored by Michigan Academy of Family Physicians, at Towsley Center, University of Michigan Medical Center*

Jan. 21 – MSMS Council, at MSMS Headquarters, contact: Warren F. Tryloff, director

Jan. 25-30 – Second Midwest Winter Institute on Alcohol Studies, Eastern Michigan University, Ypsilanti, contact: John Cook, chief, Information and Education, Michigan Department of Public Health, 3500 N. Logan, Lansing

Jan. 26-30 – Family Practice Review II, cosponsored by the Michigan Academy of Family Physicians, at Towsley Center, University of Michigan Medical Center*

Feb. 10-17 – Medical Specialty Review Seminar, Snowmass-at-Aspen, sponsored by Leonard Wolin, MD, contact: Doctor Wolin, 2216 Medford Road, Ann Arbor, 48104

Feb. 14 – February seminar, Michigan Society of Pathologists, Henry Ford Hospital, contact: Jacob E. Briski, MD, Department of Pathology, St. John Hospital, Detroit, 48236

Feb. 19 – February meeting, "Genetic Aspects of Autoimmune Disease," Michigan Allergy Society, at Mercy College of Detroit, Contact: B. David Wilson, MD, secretary, MAS, 4615 W. Main St., Kalamazoo 49007

Feb. 23-27 – Postgraduate course, "Emergency Medicine," cosponsored by the American College of Emergency Physicians, at Towsley Center, University of Michigan Medical Center*

March 3-4 – Postgraduate course, "Advances in Pediatrics," cosponsored by the Michigan chapter, American Association of Pediatricians, at Towsley Center, University of Michigan Medical Center*

March 15-16 – Postgraduate course, "Oncology for the Practicing Surgeon," Towsley Center, University of Michigan Medical Center*

March 23-25 – 15th Annual Michigan Conference on Maternal and Perinatal Health, at Kalamazoo Center Inn, Kalamazoo, contact: Helen Schulte, MSMS headquarters

March 24 – The Council, MSMS headquarters, contact: Warren F. Tryloff, director

March 24-25 – March meeting, "Insulin Allergy," Michigan Allergy Society, at The Lion's Den, Lansing, contact: B. David Wilson, MD, MAS secretary, 4615 W. Main St., Kalamazoo 49007

March 29-31 – Postgraduate course, "Human Allergy: Management and Its Basis," for internists, at Towsley Center, University of Michigan Medical Center*

April 1 – 1976 Michigan Conference on Medical Aspects of Organized Athletics, at Long's Convention Center, Lansing, contact: Helen Schulte, MSMS headquarters

April 3-4 – AMA Detroit regional continuing medical education meeting, Michigan Inn, Southfield, contact: William L. Simpson, MD, director, Continuing Medical Education, Wayne State University, Scott Hall, 540 E. Canfield, Detroit, 48201

April 8-10 – International postgraduate course on otolaryngology, presented by MSU Department of Otolaryngology, at Kellogg Center, East Lansing, contact: Richard E. Hansen, MSU Department of Information Services, East Lansing, 48824

April 30 – The Council, Troy Hilton, contact: Warren Tryloff, director

May 2 – The Council, Troy Hilton, contact: Warren Tryloff, director

May 19 – Annual meeting, Michigan Allergy Society, contact: B. David Wilson, MD, secretary, MAS, 4615 W. Main St., Kalamazoo 49007

June 2-4 – Annual meeting, Michigan Public Health Association, Grand Hotel, Mackinac Island, contact: LaRue Miller, executive director, 403 Seymour, Lansing

June 26-July 1 – AMA Annual Convention, Dallas

**Contact: Robert K. Richards, director, Office of Intramural Education, Room 6-1109, Towsley Center for Continuing Medical Education, University of Michigan Medical Center, Ann Arbor, 48104.*

***Contact: Donald R. Burkholder, PhD, University Relations, WSU School of Medicine, 540 N. Canfield, Detroit, 4820l.*

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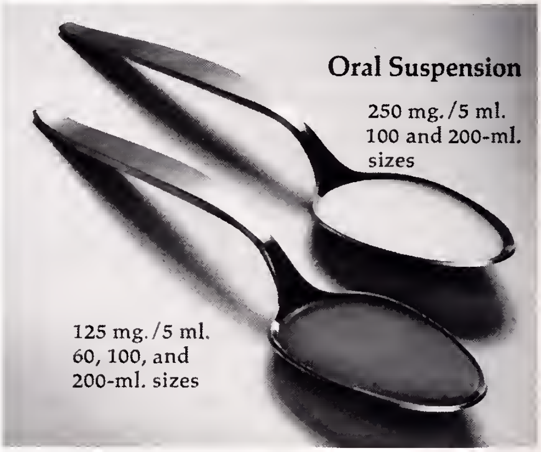

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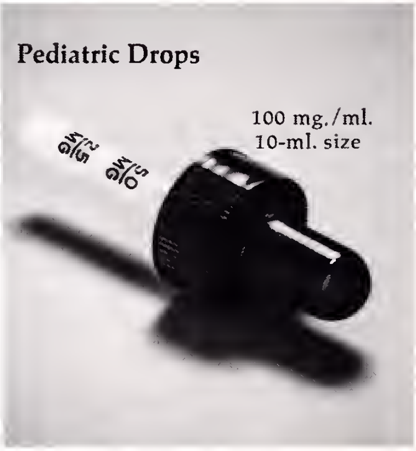

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Symptomatic Gonococcal Infections of Children: A Seven Year Experience in Metropolitan Detroit

By Adnan S. Dajani, MD
Detroit

A nationwide increase in the incidence of gonorrhea has been noted in recent years, particularly in the young adult population. Gonococcal infections in children are not often recognized[1-3], and most reports in the literature focus on rare manifestations[4], on unusual modes of transmission[5,6], or on gonococcal ophthalmia[7,8]. Little is available on the overall picture of gonococcal infections in infants and children[9,10].

Over the past seven years, *Neisseria gonorrhoeae* was recovered in our laboratory from 222 symptomatic patients seen at our hospital. The present report is a retrospective analysis of the records of these patients with primary emphasis on the clinical spectrum of the disease.

Materials and Methods

Between January 1967 and December 1973, *N. gonorrhoeae* was isolated in our diagnostic microbiology laboratory on 224 occasions from 222 patients. The records of these infants and children seen in the emergency room, outpatient department or as inpatients at Children's Hospital of Michigan (CHM) were reviewed.

Primary isolation of the organisms from vaginal, urethral or eye cultures was achieved on chocolate agar plates (1967-1971) and on Thayer-Martin plates since 1971. Body fluid cultures were done in brain-heart infusion broth containing 0.1% agar, and subcultured on chocolate agar. All plates were incubated at 36°C in 5% CO_2 atmosphere. Colonies of *N. gonorrhoeae* were so identified by a positive oxidase reaction of gram negative diplococci and by fermentation of glucose but not lactose or maltose.

Results

All 222 subjects included in this report were inner-city dwellers, living within a two-mile radius of CHM. All but two patients were black. This racial preponderance is perhaps not a reflection of residential clustering, since the neighborhood is a mixed racial one, and approximately equal numbers of blacks and whites are seen in our hospital and clinics.

The annual prevalence of recovery of *N. gonorrhoeae* over the seven-year period is shown in **Table I.** An increase in the number of cases occurred in 1970 with a decline subsequently. Little variation in monthly prevalence was noted over the years.

The magnitude of the disease can perhaps be more appreciated by viewing some of the data supplied to the city and state health departments **(Table I).** It is apparent that gonorrhea is predominately seen in older teenagers and adults. Moreover, a steady increase in reported cases at all ages occurred in the state over the 10-year period. Of the 194,000 reported cases of gonorrhea in Michigan from 1964 to 1972, only 2,598 (1.3%) occurred in children under 14 years of age. The City of Detroit accounted for 59% of gonococcal infections of children under 14 years of age in the whole State of Michigan.

All patients seen at CHM and yielding positive cultures had detectable disease (usually discharge) at the sites cultured. More than half of the positive cultures were from vaginal swabs **(Figure 1),** with conjunctival and male urethral cultures accounting for almost all the remaining positive isolates. Blood cultures were positive in only two cases, both of whom were neonates. One positive knee aspirate was from a 15 year old female, and a positive gastric culture was from a newborn girl. One neonate had simultaneously positive blood and eye cultures and another patient had positive vaginal and eye cultures. A breakdown of the positive cultures from vaginas, conjunctivas and male urethras in relation to age is also illustrated in **Figure 1.** Distinct differences in the frequencies of diseases in relation to age were noted among the three sites. Most (66%) of the cases of ophthalmia occurred in neonates, and in this age group the affliction was more common in females than in

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Doctor Dajani is director, Division of Infectious Diseases, Children's Hospital of Michigan, professor in the Department of Pediatrics, Wayne State University School of Medicine, Detroit. His study is supported by a grant from the Matilda Wilson Fund.

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Table I. Cases of gonococcal infections

Year	Children's Hospital of Michigan	City of Detroit*	State of Michigan*	
	Newborns — 14 yrs.	Newborns — 14 yrs.	Newborns — 14 yrs.	All ages
1964	—**	126	187	12,028
1965	—**	123	198	14,319
1966	—**	165	297	15,424
1967	27	173	257	17,088
1968	24	155	270	18,153
1969	22	113	189	18,534
1970	46	162	263	20,359
1971	33	170	234	22,259
1972	34	145	294	24,750
1973	36	189	409	31,086
All years	222	1521	2598	194,000

*From Venereal Disease in Michigan (Status Report — (1973) Michigan Department of Public Health, Division of Disease Control

**Data for 1964-1966 not available.

males (ratio of 1.6:1). Some ophthalmia occurred in the other age groups, but with no particular peaks. All five cases of ophthalmia over the age of three years occurred in females, and only one of them had concomitant vaginitis.

No vaginitis was seen in girls under the age of one year (**Figure 1**). Of the 124 cases of vaginitis, 22 (18%) were between the ages of one and three years, the youngest being a 15 month old girl. The peak occurrence of vaginitis was in the three- to six-year-old girls (48% of all cases). Only seven percent of vaginitis patients were older than 10 years. In contrast to vaginitis, male urethritis was less common. Furthermore, 81% of the urethritis cases were older than six years of age and 54% were older than 10 years.

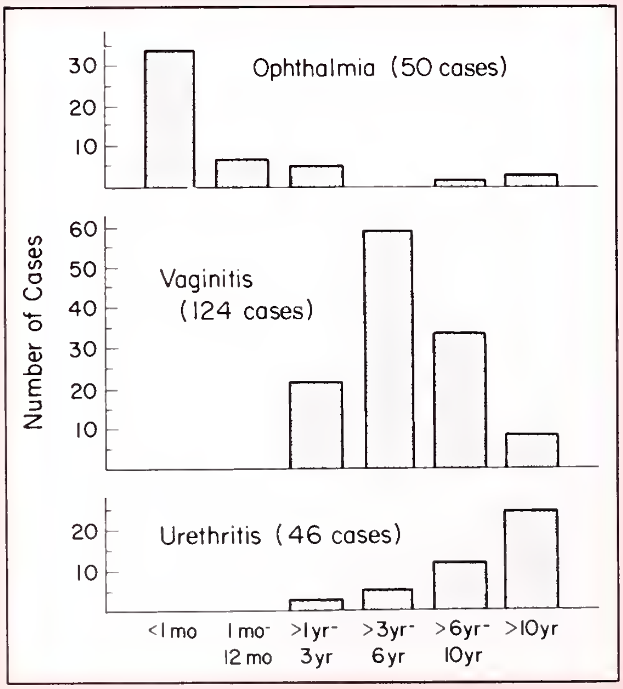

Fig. 1. Recovery of *N. gonorrhoeae* from three body sites in various age groups.

Follow-up observations were made on many patients and deserve some mention. Thirty of the 50 patients with gonococcal ophthalmia were subsequently seen and all but one had completely cleared. A 15 year old girl with unilateral ophthalmia and who did not seek medical advice until one week after the onset of illness, developed endophthalmitis despite intensive therapy and required enucleation of that eye. One newborn with ophthalmia inadvertently never received any treatment, but when seen a week later had a normal conjunctiva. The two patients with septicemia recovered without sequelae, and the patient with septic arthritis also recovered completely.

Of the 170 cases of vaginitis and urethritis, follow-up was available on 83. Four cases failed to respond to treatment; all patients were females with vaginitis (ages three, five and seven years) and all had initially received a single injection of 1.2 million units of procaine penicillin. Failure of response was defined as follows: two patients did not improve clinically when seen five and seven days later, one patient had a positive gram smear two weeks after therapy and one had a positive culture 18 days after treatment was given. After a second injection of the same medication, all patients improved clinically and had negative cultures.

Since nonvenereal transmission of gonorrhea in children has been suggested recently[5], our records were analyzed as to possible modes of transmission as obtained by history. Positive information for definite sexual contact was elicited from 24 cases only (18 females and six males). Of the 18 females, 14 were under the age of nine years, whereas all but one of the six males were nine years or older.

Only one child of the 24 had contact with a female; all other known contacts were males, usually older teenagers or adults. A history of incest was obtained in seven cases. Although sexual contact could have occurred in other cases, no such history was obtained.

Culturally proven gonorrhea occurred in 13 individuals who were family members of the 222 cases reported here. Among the 13, there were four parents (two fathers, two mothers) and nine older siblings. No one family had more than one of these 13 cases.

Discussion

The increase in venereal diseases in this country and others, particularly in the past decade, is a well-known fact. Gonorrhea in young adults and in the older teenagers is epidemic; however, the magnitude of gonococcal infections in the pediatric age group is often underestimated, not well recognized or poorly publicized. Several reasons to explain this have been pointed out by the Committee on Youth of the American Academy of Pediatrics[1]. Increased awareness and prompt reporting of cases are perhaps the most important aspects that need re-emphasis.

The present report indicates that the extent of gonococcal infections in children, at least in the Detroit area, has also reached an alarming magnitude. Although the disease is much less common in infants and children than in older teenagers or adults, physicians should be constantly aware of the potential existence of disease in the younger child.

Vaginitis was the most common form of gonococcal infections in this series of cases. This is a distressing social and medical problem, which has also been reported previously by others[3,9-13]. Reasons for increased propensity to infection in young girls include hormonal influences, the alkaline pH of the vagina as well as some anatomical factors.

Vaginitis was a symptomatic disease in all our patients, and suspicion of gonorrhea is much more likely under such conditions. The disease in young girls can be latent[2], however, making the diagnosis more difficult to suspect. Whether asymptomatic carriers exist among the young is not known, but the possibility warrants epidemiologic exploration.

Urethritis was much less frequent than vaginitis in this series and occurred in an older age group. Again, all boys with urethritis were symptomatic. Asymptomatic gonorrhea in men has been reported recently[14], a fact which further complicates the evasiveness of this disease. Similar information in children is again lacking.

The suspicion of gonococcal ophthalmia in newborns is perhaps not as difficult as that of vaginitis or urethritis in the young child. Ophthalmia outside the neonatal period is not often recognized as being gonococcal. Of the cases of ophthalmia reported here, 34% occurred in children over one month of age and 20% were older than one year. Unless *N. gonorrhoeae* is specifically looked for, it is difficult, if not impossible, to recognize this agent as a cause of conjunctivitis.

Many aspects of the epidemiology of gonococcal infections remain obscure or unexplored. The retrospective nature of this study does not allow adequate epidemiologic analysis of the data. Although non-venereal transmission of gonorrhea in children has been postulated[5], it is not proven beyond doubt. In our cases, a history of sexual contact was obtained in only a small number of cases (13%, excluding patients with gonococcal ophthalmia). A negative history does not negate this mode of transmission, but should at least prompt further prospective evaluation of various modes of spread of gonorrhea within families.

Summary

Neisseria gonorrhoeae was isolated from 222 infants and children over a seven year period. All subjects were inner city dwellers in Detroit, and all but two were black. Ophthalmia accounted for 22% of all infections, occurred mainly in newborns, and was more common in females. Urethritis was noted in 21% of cases, and mainly afflicted boys older than six years of age. Vaginitis was the most common form of infection (55%), and usually affected girls under the age of six years. *N. gonorrhoeae* was also recovered from two blood cultures, one gastric culture, and a knee aspirate.

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(Continued on page 763)

Perinatal Tips

By Paul M. Zavell, MD
Detroit

The following case from the files of the Wayne County Medical Society Perinatal Mortality Study Committee is presented as an aid in continuing education.

Maternal

This was the third pregancy for this 36 year old, gravida III, para II (III) white mother with A+ Blood type. Both children are home, alive and well. Because of cephalopelvic disproportion all three infants were delivered by C-Section. This pregnancy was terminated at 37 weeks, as planned, with no difficulties. The mother went home six days post-operatively and did well.

Fetal

This seven-pound, 12-ounce white female infant had a completely uncomplicated nursery course. The only finding was that on her initial physical exam she had only one umbilical artery.

When the baby reached three weeks of age, all members of the family had "flu" with head colds, cough, vomiting and diarrhea. This infant, now weighing 10 pounds, began with watery, greenish-yellow, diarrheal stools frequently and in 12 hours she was noted to be very lethargic with rigidity of the extremities. Apnea was noted on one occasion. There was no vomiting and she was afebrile.

She was seen by her pediatrician who felt she had severe enteritis and admitted her to the hospital. There she was noted to be lethargic, severely pale, with pulse rate of 180-200/min, respiratory rate of 52, temp of 101° (R). Liver was four to five centimeters and some large purplish spots appeared to be present over most of the body (some even appeared to be petechial). The diagnoses entertained were: 1) Gastroenteritis; 2) ? Sepsis; 3) ? D.I.C.; 4) ? Blood Dyscrasia.

Studies done included the following: 1) CBC with Hgb of 7.9 gm, Hct of 21.0, WBC of 2,600 with 14 PMN, 09 Bd, 76 Lymph, 01 Eos; 2) Urine of yellow color, S.G. of 1.010, Ph of 8.0 with +1 protein and innumerable wbc's; 3) Platelets of 332,000/m3, prothrombin time of 19.8 sec (control of 10.7 sec), PTT of 22.6 sec (control of 28.5), glucose of 120, BUN of 16, SGOT of 12, LDH of 20, Na of 138, K of 4.6 (M Eq/L), Cl of 110, CO_2 of 11.

Upon admission, throat, blood, and urine cultures were drawn. A chest x-ray (portable) was considered normal. An abdominal x-ray showed a "large liver with a superimposed shadow that could be an enlarged right kidney." An I.V. of 5% D/W in 0.2 N/S was started and within an hour after admission 50 CC of whole blood was given. However, the infant seemed to become progressively worse. A Spinal Tap was now done with clear fluid showing no bacteria and only 17 WBC (80% PMN, 20% MMO) and 4 Rbc with glucose of 50, Cl of 121, and protein of 30. Two hours after admission the infant had a bloody-mucus stool. At this time Ampicillin 450 mgm I.V. q 6 h and Kanamycin 35 mgm IM q 12 h were started.

During the next four hours the infant's condition steadily worsened with increasing respiratory distress and rales appearing in both bases. Repeat chest x-ray showed "extensive pneumonic infiltration involving the entire right lung and the hilar and basal portions of the left lung." Because the heart rate had risen to about 200/min, Digoxin 0.10 mgm I.V. was given with 0.05 mgm q 8 h x 2 to follow. However this did not seem to help the infant in any way. Supportive care with a Croupette and O_2 were of little or no value, and the infant expired eight hours after admission.

An autopsy was done that showed bilateral hemorrhage of the adrenals with minimal leptomeningitis and pulmonary congestion with edema but no true pneumonia. The blood culture drawn before death later grew out Neisseria Meningitidis. The final diagnosis was Waterhouse Friderichsen Syndrome.

Perinatal Committee Comments

1. Both the low hemoglobin (7.9 gm) and the low WBC of 2600 pointed out a very overwhelmingly distressful situation here. This would lead one quickly to suspect sepsis or the like was present, *probably* on a bacterial basis.
2. One umbilical artery can be indicative of congenital anomalies but is not diagnostic.
3. Diagnoses that could have been entertained before death might have been hydronephrosis, polycystic kidney, hemorrhage into the renal capsule, meningitis (E. Coli) and generalized cytomegalic inclusion disease.
4. Large purplish spots (some petechial) on a sick infant admitted after arriving from an environment of severe U.R.I. at home should alert one to possible bacterial infection. Glass slide studies of the petechial lesions might have helped to arrive at the correct diagnosis very soon after hospital admission.

Doctor Zavell is a member, Neo-Natal and Hospital Care Committee, Michigan Chapter, AAP, and is chairman, Perinatal Mortality Study Committee, Wayne County Medical Society.

Evaluation of a Neonatal Recovery Room

By Enrique M. Ostrea, Jr., MD
Antonia G. Capino, MD
Cleofe J. Chavez, MD
Detroit

Introduction:

The first few hours of life constitute a critical period of adjustment of all neonates, particularly the high-risk infant who is compromised at birth. Not infrequently, when the neonatal Intensive Care Unit (ICU) of a hospital is far from the delivery floor, a significant portion of this critical period is spent in the transport of the infants. This may further stress an already compromised infant and cause an increase in neonatal mortality or morbidity. Since the neonatal ICU at Hutzel Hospital is located in the manner so described, a Neonatal Recovery Room Unit (NRRU) was built in the delivery suite as a solution to this problem. The room was to provide the infants, while being stabilized prior to transport, with temporary, intensive care. This report describes our experience.

Materials and Methods

The neonatal recovery room was designed as a miniature intensive care unit. It can accommodate two infants at one time **(Fig. 1).** The following infants were admitted to the unit:

(1) high-risk infants (recognized by history) born following a difficult labor and/or delivery.

(2) infants born with an Apgar score of less than 5 at one minute and requiring resuscitation.

(3) infants requiring emergency procedures such as exchange transfusion for Rh incompatibility; tracheal lavage for meconium aspiration, etc.

The pediatric resident assigned to the obstetric ward was in charge of the unit. A nurse from the neonatal ICU was called to the NRRU if a newborn candidate was anticipated or admitted. The infant in the NRRU was subsequently transferred to the neonatal ICU only after its vital signs had stabilized and its abdominal skin temperature was at least 97° F.

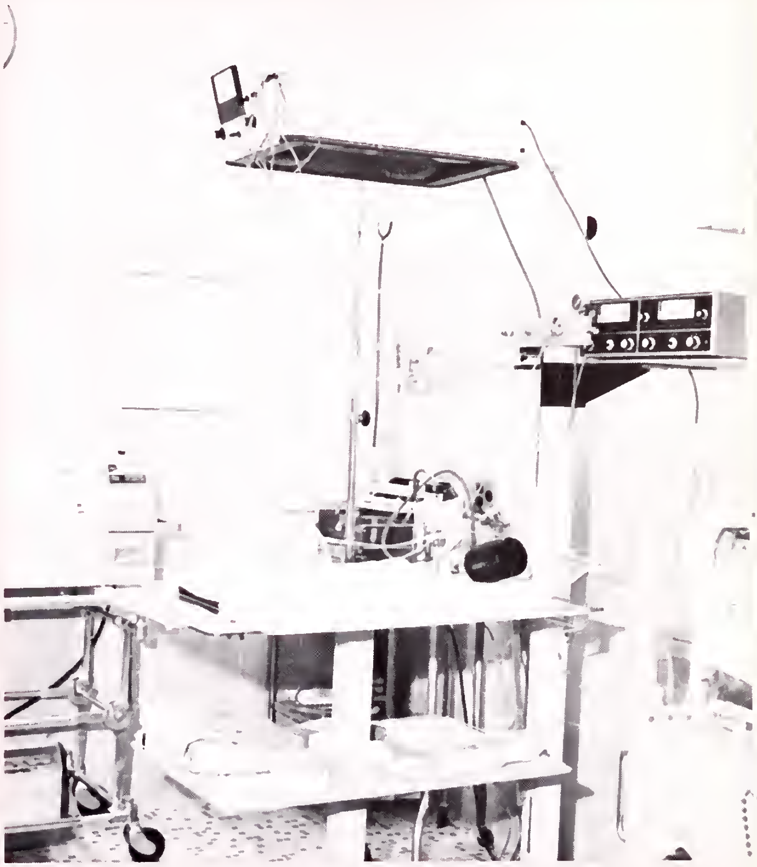

Fig. 1 *Neonatal Recovery Room at Hutzel Hospital, Detroit.*

Results

Within 10 months, 54 out of 4,572 livebirths (0.98%) were admitted to the NRRU for the following reasons:

1. Infants with asphyxia (Apgar score less than 5 at one minute) who required resuscitation (N = 39). Eight percent (8.0%) of these infants were meconium stained and received tracheal lavage.
2. High-risk infants (by history) born following a difficult labor and/or delivery, (N = 10).
3. Infants with severe anemia secondary to Rh incompatibility and requiring partial exchange transfusion (N = 5).

Table I shows that the majority of the infants admitted to the NRRU were premature, of low birthweight and asphyxiated. It took a mean duration of 48.3 minutes (range = 16.0-18.6 minutes) to restore and stabilize the vital signs of these infants before they could be safely transported.

The authors are with the Department of Pediatrics, Wayne State University School of Medicine, Hutzel Hospital and Children's Hospital of Michigan. Doctor Capino and Doctor Chavez are fellows in neonatology at Hutzel. Doctor Ostrea is assistant professor, Pediatrics, Wayne State University School of Medicine and director of the Nursery, Hutzel Hospital.

Twenty-three (23) of the infants subsequently expired whereas 31 survived. Survival was significantly correlated ($P < 0.005$) with gestational age, birthweight and one-minute Apgar score (**Table II**). Autopsy on nine of the 23 infants showed extensive atelectasis in 78% of the cases, most likely secondary to severe prematurity. One infant died from tracheal atresia.

TABLE I. Characteristics of the 54 Infants Admitted to the Neonatal Recovery Room Unit (NRRU).

Apgar score (1 minute)	3.6 ± 2.7
Birth weight (grams)	2183 ± 954
Gestational age* (weeks)	34.7 ± 5.5
Sex:	
Male	38 (70%)
Female	16 (30%)
Duration of stay (minutes)	48.3 ± 32.3
Expired (total)	23 (42.5%)
Survived (total)	31 (57.4%)

*Estimated by the scoring system of Dubowitz, et al[1]

TABLE II. Characteristics of the Infants Admitted to Neonatal Recovery Room Unit Who Expired or Survived.

	Expired	Survived
Total	23 (42.6%)	41 (57.4%)
Gestational Age (weeks)	31.7 ± 5.0	36.9 ± 4.2*
Birth weight (grams)	1518 ± 783	2675 ± 902*
Apgar (1 minute) score	2.0 ± 1.9	4.8 ± 2.7*

*$P < 0.005$ by Student Fisher "t" test.

Discussion

Our study indicates that the NRRU provided a convenient place for a compromised infant to stabilize completely prior to its transport to a distant neonatal intensive care unit. It is, however, difficult to prove whether this contributed significantly towards improving neonatal survival since there was a significant difference in the gestational age, birth weight and pathology of the infants who died as compared to those who survived. One alternative was to compare the survival of the infants in this study to those reported by other members when using birth weight and Apgar score as indices.[2,3] However, the number of cases in our series is too small to make such a comparison valid. In other aspects, however, it was felt that there were distinct advantages in having a NRRU. In an evaluation survey taken from 36 pediatric residents who worked in the NRRU, all felt that working in the NRRU was more effective than in the Delivery Room especially if procedures such as tracheal lavage, exchange transfusion, catheterization, etc. had to be done. The main reasons given were:

1. An experienced pediatric ICU nurse assisted the pediatric resident. It was the common experience that the circulating obstetric nurse who assisted the pediatrician under the usual circumstance was not as helpful during emergency situations, since she was not familiar with pediatric care and had other duties to perform in the Delivery Room.
2. There was more space to work in the NRRU.
3. Auxiliary equipment such as heart rate monitor, neonatal EKG, blood pressure machine, etc., were available when needed. A specific area which provided these facilities was particularly useful especially if a compromised infant was unexpectedly delivered in a room which did not carry these equipments.

From the same survey, there were also some criticisms about the unit:

1. Occasional difficulty in obtaining the pediatric ICU nurse particularly if the neonatal ICU was busy. A suggestion was made to permanently staff the NRRU with a pediatric ICU nurse.
2. Since the NRRU was on the obstetric floor, there was sometimes confusion as to which department was to keep the NRRU clean and resupplied after its use.
3. With the presence of a NRRU, there was, at times, a tendency for the obstetric personnel to rely exclusively on the NRRU and neglect to keep the resuscitation in some delivery rooms constantly available and in good working condition.

These criticisms and suggestions have been used to subsequently improve the NRRU.

Summary

Our study describes a neonatal recovery room unit which provides for immediate intensive care to sick newborns in the delivery floor prior to their transport to the neonatal ICU. This study reports our experience on 54 infants brought to the NRRU for various reasons but chiefly because of low Apgar scores at birth requiring resuscitation. The benefits to the infants and pediatrician in use of the NRRU have been presented. Although no conclusions can be drawn concerning its role in improving neonatal survival, the advantages it offers justify us to continue and recommend its use particularly in the situation it is called for.

(Continued on page 763)

Brachial Artery Occlusion Following Cardiac Catheterization; Etiology and Treatment

By James Wm. Myers, MD, FACS
Ralph L. Brandt, MD, FACC
Richard D. Judge, MD, FACC
Ron J. VandenBelt, MD
Ann Arbor

This article represents a retrospective study of 1,500 brachial arteriotomies performed for cardiac catheterization. We have evaluated the patients who lost their pulse, indication for operative intervention, and the results of therapy. Because of this review, the authors now recommend surgical exploration for virtually all patients who have lost their radial pulse post cardiac catheterization.

Introduction

In this era of increasing prevalence of coronary artery disease, the physician is endeavoring to establish a more positive diagnosis by the use of arteriography. Over the past decade, mostly due to the work of Sones,[1] the technique of cardiac catheterization per brachial artery has become disseminated throughout the world for use as a diagnostic aid. There is not only going to be an increasing number of cardiac catheterizations performed, but more will be carried out in community hospitals, since a large number of these are establishing special study units for this purpose. As with any invasive technique involving arteriography, complications are anticipated. The current article presents the retrospective experience and complications associated with 1,500 consecutive brachial artery arteriotomy catheterizations from July 1970 through July 1973 in a community hospital affiliated with a medical center.

Patient Selection

Patients included in the series are those of private physicians referred to the cardiology department for cardiac catherization and selective coronary arteriography along with retrograde aortic left heart catheterizations. The arteriotomy, catheterization procedure, and arteriotomy repair was performed by a cardiac fellow, supervised by a cardiologist. All of the patients were followed post-cardiac catheterization by the cardiologist and if there was any evidence of absence of radial pulse or significant symptomatology in the hand, a vascular surgeon was asked to see the patient in consultation.

Early in the experience, indications for operation were very strict, in that obvious ischemic symptoms even without activity were felt necessary before operative intervention was considered. As experience with the technique evolved and after long-term follow-up of non-operated patients was accomplished, a more aggressive approach was used, unless the patient's medical condition otherwise contraindicated operative intervention. During the last two years of the study, virtually all patients with loss of radial pulse or ischemic symptoms were taken to the operating room for thromboembolectomy and possible arterioplasty.

Indications

The diagnosis of vascular insufficiency in the arm is quite obvious when the patient has a numb, pale, cold extremity and decreased strength in the arm but in other cases the symptoms are more subtle. The more typical patient, in our experience, is one who complains only of mild amount of numbness and discomfort at rest during the first 24 hours following catheterization. It has been found that by exercising these patients, with their arm elevated, numbness and weakness developed very rapidly with signs typical of ischemia appearing. It is this latter group of patients who have benefited most by a more aggressive approach in treatment. It has been our experience that this group of patients, without operative intervention, ultimately return, complaining of weakness, numbness and an increased sensitivity to temperature changes, six weeks to two months later.

Technique of Thrombectomy and Arterioplasty

Most patients in the series have undergone surgical intervention within four to 48 hours after the cardiac catheterization. In one case, however, there was a delay in consultation and surgical intervention was carried out five days later without sequelae; this patient had excellent return of pulses and symptoms disappeared. In all patients surgical repair was performed in the operating room with mild sedation and under local anesthesia. The previous incision was opened and extended and the artery mobilized for a distance of approximately 1½ inches. At this time the patient was heparinized and the vessel clamped and the arteriotomy opened. It was clear that a purely mechanical abnormality was not the cause of pulse loss since spasm of the vessel or narrowing of the

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TABLE I

Results of 1,500 Brachial Arteriotomies

Complications	Number	%Total
Total patients with complications	40	2.7%
Absent pulses, no surgery	16	1.0%
Absent pulses, surgery	24	1.7%

TABLE II

Surgical Treatment of 24 Patients
(1.7% of Total Arteriotomies)

Thrombectomy and Arterioplasty	24	(100%of Total)
Return Normal Pulses	18	(75%of Total)
No Pulses	6	(25%of Total)
Essentially Asymptomatic	3	(12.5%of Total)
Continued Symptoms	3	(12.5%of Total)

TABLE III

Surgical Treatment 3 Symptomatic Failures

Immediate vein graft for marked vascular insufficiency — excellent return of pulse and function.	1 Patient
Delayed vein graft for claudication with excellent return of function and pulse.	2 Patients

vessel as a result of closure of the arteriotomy was not uniformly found.

A thrombus proximal to the arteriotomy was discovered at the arteriotomy site in each case. Fogarty catheters, usually size four, were passed distally into both the radial and ulnar vessels, if possible. In most instances the catheter would go into the radial artery, although on a number of occasions it was not possible to advance the catheter into the ulnar artery as well. In most cases, thrombotic or embolic material was removed from these vessels. After removal of the clots there was invariably back bleeding present. Assured of a distal run-off, a Fogarty catheter was then passed proximally into the axillary artery and the clot removed. This established a very brisk bleeding through the arteriotomy site.

In all of the cases it was noted that there was intimal damage on the posterior wall of the artery with associated fibrin accumulation. This injury appeared to be due to catheter trauma. Careful debridement of thrombotic material and intimal flaps on the posterior wall of the vessel was performed. Meticulous care was taken to be certain that the intima was smooth and clean and any debris removed prior to closure of the arteriotomy.

Arteriotomies were closed with a running 6-0 Ethflex suture material. Clamps were removed and in most cases the heparin was not reversed because of the minimal bleeding. Those patients who experienced most relief of symptoms were those who had immediate return of pulses in the operating room. However, two or three patients actually did have return of their pulses over the next several hours, even though none was present in the operating room.

Results

Table I outlines the results of our retrospective evaluation. Fifteen-hundred arteriotomies were performed for selective coronary arteriography. Forty patients were seen in consultation by the vascular surgeon because of absent pulses, weakness of the arm and/or rest pain. Sixteen of these patients were essentially asymptomatic with an absent radial pulse and moderate exercise did not induce claudication. In several of these 16 patients with unstable cardiac status, surgical intervention, even under local anesthesia, seemed inappropriate because of the lack of symptoms. The remaining 24 patients evaluated had symptoms and findings ranging from a cool hand to serious rest pain and ischemia. All 24 of these patients underwent surgical intervention and the results are shown in **Table II.** The procedure consisted of re-exploration, thrombectomy and arterioplasty. In these 24 patients, operative results were excellent in 18 patients with return of the radial pulse to normal and relief of all symptoms in the hand. In the remaining six patients, the local procedure failed. Three of these patients had improvement in symptoms even though no significant pulse was regained. Three patients remained with continuing rest pain and ischemic signs requiring further operative intervention. No attempt has been made to make a quantitative evaluation of pulse; rather, the clinical presence or absence of pulse and symptoms was used as our criteria of success.

Table III shows the treatment carried out in the three patients with failure of the initial arterioplasty and persistent symptoms. One patient had severe arterial insufficiency and rest pain and there was concern about the possible loss of limb. She underwent saphenous vein bypass grafting within 24 hours of her cardiac catheterization and approximately 16 hours after her initial attempt at corrective thrombectomy and arterioplasty. Subsequent to this procedure the patient became totally asymptomatic with the return of pulses to normal. During follow-up of nine months on this, patient has had no sequelae and normal pulses persist. Two other patients in the group had claudication with minimal exercise and underwent late vein grafts at three and four months after the catheterization was carried out. Both patients had restoration of pulses and became totally asymptomatic.

The vein graft was performed under local anesthesia in the patient who was operated upon urgently and with the use of brachial block in the two

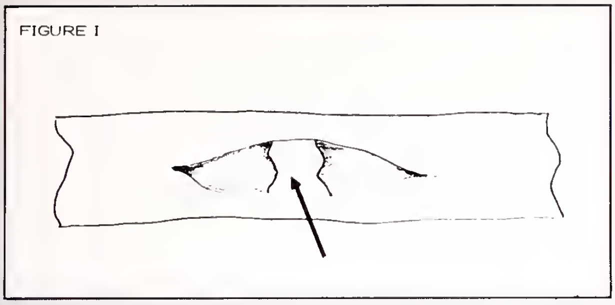

FIGURE I

Top view brachial artery: Arrow shows disruption posterior intima, the most common finding at surgery.

FIGURE II

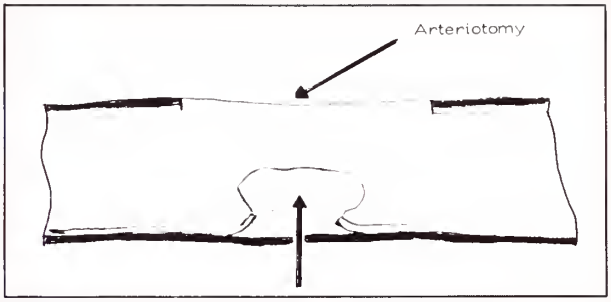

FIGURE II

Side view brachial artery: Arrow showing area of disrupted posterior intima with thrombin-like clot.

patients operated on at three and four months. In the other two patients requiring vein bypass grafting of the brachial artery, sections of the basilic vein were placed for lengths of approximately 3½ inches. This technique was given excellent results in long-term follow-up, which averages nine months, at this time.

Discussion

In this study the etiology of brachial artery thrombosis has been primarily found to be secondary to local intimal injury, in the majority of cases, **(Fig. I & II).** This agrees with the experience of Barabas et al[5]. Review of the literature on brachial arteriotomies reveals thrombosis rates of 3.6 to 13%[4,2,5,3] before exploration of the artery. Most series have a very high success rate in restoration of the radial pulse with corrective surgery. The present series compares favorably in both complication rate (2.7%) and operative results.

Summary

While some patients with post catheterization loss of radial pulse have minimal symptoms and do not warrant operative intervention, especially if the cardiac status is unstable, it has been found that the majority of patients, even with mild ischemic symptoms while in the hospital, will develop more severe symptoms when their activity is increased following hospital discharge. The use of thrombectomy and arterioplasty has usually been adquate for restoration of circulation. However, if necessary, resection and vein grafting can be done with minimal risk, either early or late, and with gratifying results.

With the clearly demonstrated safety and efficiency of the operative techniques discussed above, we now recommend thrombectomy and arterioplasty in all patients with pulse loss associated with ischemic signs and symptoms following cardiac catheterization.

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Monthly Surveillance Report

Cases of Certain Diseases
Reported to the Michigan Department of Public Health

For the Five Week Period Ending Oct. 31, 1975

MICHIGAN
DEPARTMENT
OF PUBLIC
HEALTH

	1975 This 5-Week Period	1974 Same 5-Week Period	1975 Total To Above Date	1974 Total Same Date	Total Cases for 1974
Rubella	90	62	1,509	1,273	1,388
Cong. Rubella Syndrome	0	0	1	0	1
Measles	73	148	3,089	2,098	2,365
Whooping Cough	8	8	73	83	104
Diphtheria	0	0	1	0	0
Mumps	321	302	8,407	5,763	7,230
Scarlet Fever & Strep Sore Throat	2,015	1,552	19,127	27,967	31,802
Tetanus	0	0	0	3	6
Poliomyelitis (Paralytic)	0	0	0	1	2
Hepatitis	237	350	2,394	3,137	3,599
Salmonellosis (other than S. typhi)	83	76	710	861	1,001
Typhoid Fever (S. typhi)	4	3	9	10	11
Shigellosis	78	157	650	1,204	1,436
Aseptic Meningitis	54	33	231	144	162
Encephalitis	40	4	120	55	69
Meningococcic Meningitis	4	5	68	44	54
H. Influenza Meningitis	9	11	108	102	121
Tuberculosis	141	111	1,012	940	1,431
Syphilis	152	214	1,387	2,316	2,659
Gonorrhea	3,583	3,247	27,131	27,019	32,152

Information can be supplied by the local health department on the local incidence of disease.

Maurice Reizen, M.D., Director
Michigan Department of Public Health

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION

Statement required by the Act of October 23, 1962; Section 4369, Title 39 of the United States Code showing the Ownership, Management and Circulation of Michigan Medicine, published four times in January and three times in all other months, 37 issues, mailed at East Lansing, Michigan, and additional post offices in Ingham County for December 1, 1974.

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Infectious Mononucleosis Associated with Anergy, Anemia, And Hilar Lymphadenopathy

A Case Report

By Daniel O. Benson, MD
Portland, Ore.
Irene Macko, MD
Detroit

Abstract

A case of infectious mononucleosis in a 34-year-old man is reported. Several unusual findings were present, and all disappeared spontaneously with the recovery from his illness. Cutaneous anergy to mumps, TB and histoplasmosis skin testing was present. Also found was hemolytic anemia and hilar adenopathy mimicking lymphoma. All disappeared within a month of the illness. These findings are discussed.

Case Report

The patient was a 34-year-old white male accountant admitted to Henry Ford Hospital on 1/21/74 complaining of a three week history of fever and chills with profuse diaphoresis. The chills were typically midafternoon, occurring daily. His temperature was elevated throughout this prehospitalization period, reaching 40° C on some occasions. Six days prior to admission the chills abruptly disappeared.

Two days after the fever and chills started, the patient was told by a colleague that his "eyeballs looked a little yellow." At the same time he noted some darkening of his urine.

On 1/18/74 (three days prior to admission) he noted the onset of a severe sore throat with moderate dysphagia, which became progressively worse.

Past medical history and review of systems was noncontributory.

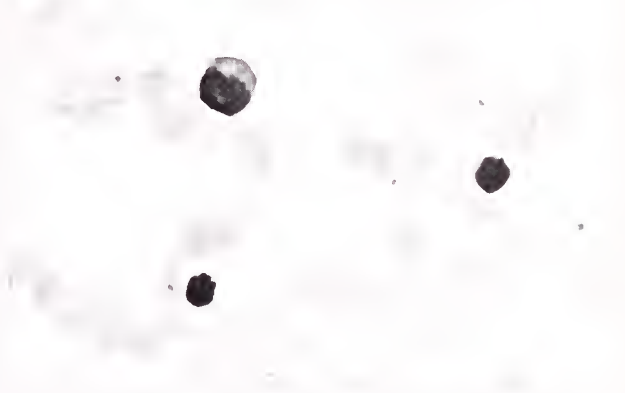

Figure 1. Peripheral smear showing an atypical lymphocyte and a normal appearing lymphocyte for comparison.

Physical examination revealed a well developed, sallow male in no acute distress. Temperature was 37.6° C, B.P. 128/60, pulse 100 and regular. Positive findings included an exudative right tonsillitis with a 1 × 2 cm tender right jugulodigastric node. In addition, small, firm, non-tender sternocleidomastoid nodes were appreciated bilaterally. There were also one or two small, non-tender supraclavicular nodes bilaterally. Bilateral, non-tender axillary adenopathy was noted, the largest node being approximately 2 × 2 cm in size. The liver was 15 cm to percussion, firm and non-tender. The spleen was 18 cm to percussion and firm.

Laboratory

On admission the hemoglobin was 9.5, WBC 12,300, 27% polys, 3% prolymphocytes, 48% lymphocytes, 14% leucocytoid lymphs, 5% monocytes, 1% metamyelocytes, 1% myelocytes, 1% plasmacytoid lymphocytes, few ovalycytes, few spherocytes and moderate microcytes. **Fig. 1.** Platelet count 204,000. Sedimentation rate 19 mm/hr. Reticulocyte count 8.3%. Coombs tests direct and indirect were negative. Bone marrow showed hypercellularity with granulocytic left shift, normoblastic and macronormoblastic erythropoiesis, eosinophilia and activated atypical lymphocytes. M.E. ratio 1.8:1. No granulomatous, lymphomatous or tumor cells were seen.

Pertinent serum tests are shown in **Table 1.**

Liver-spleen scan showed massive hepatospleenomegaly without filling defects.

Heterophile titer was 1:28 on admission. Mumps, Monilia 1:1000 and PPD 5 T.U. skin tests were negative at 48 and 72 hours times two.

Doctor Benson is an ophthalmology resident at the University of Oregon Health Sciences Center in Portland. Doctor Macko was associated with the Third Medical Division, Henry Ford Hospital, 2799 West Grand Blvd., Detroit, at the time this paper was prepared. The paper was readied for publication in November, 1974.

Table 1
Significant lab studies
(normal values in parentheses where necessary)

LDH IU/L (25-100)	160	Albumin gm%	3.22
SGPT IU/L	82	Gamma globulin gm%	1.54 (0.6-1.4)
SGOT IU/L	56	IgM mg%	224 (30-120)
Biliruben, total mg%	1.8	IgG mg%	1438 (600-1400)
Alkaline phosphatase Bodanski (1.5-4.0)	16.8	IgA mg%	174 (30-135)
Australian Antigen	neg.		

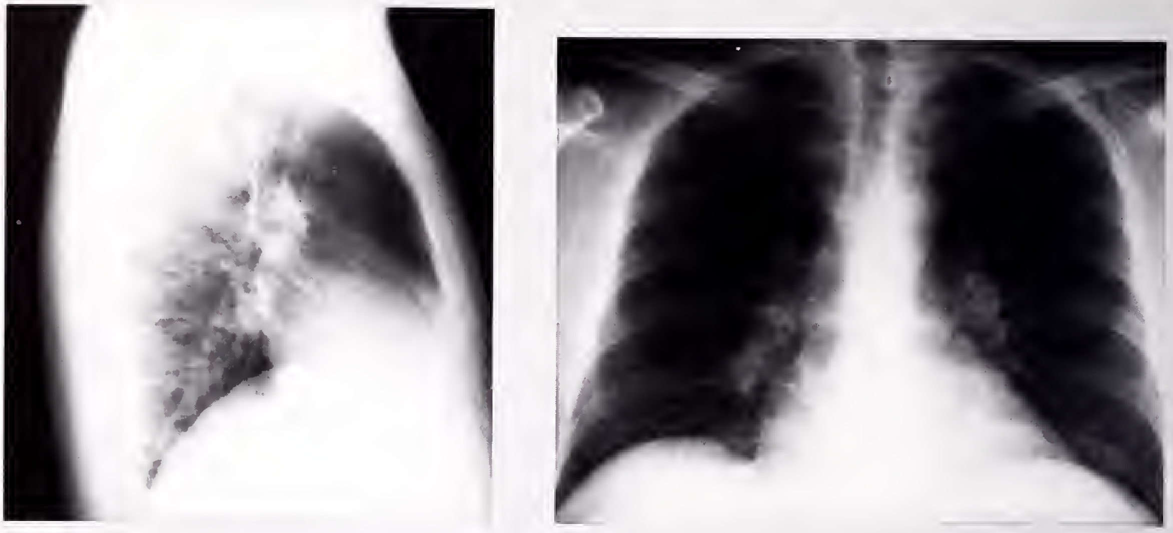

Figure 2. PA and lateral chest X-Ray on admission. Notice prominent hilar lymphadenopathy.

Mumps compliment fixation was 1/32. Sabin-Feldman dye test negative. Throat cultures were negative, and blood cultures were negative times three.

Chest X-Ray and laminagrams were done and showed prominent hilar lymphadenopathy. **Fig. 2.**

Because of the anergy, hilar lymphadenopathy and anemia, the diagnosis of lymphoma was entertained and a left axillary lymph node biopsy was done. It showed reactive hyperplasia. Repeat heterophile titer was 1:896 with a differential absorbed titer of 1:224.

After a week's hospitalization the patient was asymptomatic and was discharged to outpatient clinic followup.

One month following discharge skin tests for mumps and streptokinase-streptodornase were positive. Alkaline phosphatase was 3.7, SGOT 17, Hemoglobin 15.8, WBC 6,700 with 20% lymphocytes and 80% polys. Protein and immunoglobulin electrophoresis were normal, and chest X-Ray was normal. **Fig. 3.** His liver and spleen were much smaller, and he was without fever or chills.

Discussion

This case brings together several unusual manifestations of infectious mononucleosis which have been reported separately elsewhere.

Anergy has recently been reported. First it was reported in Britain as a transient depression of cell mediated reactivity to BCG[1,2] and recently reported as suppression of mumps, histoplasmosis and TB skin test reactivity in a case of severe, fatal infectious mononucleosis.[3]

The hematological picture in this patient leads to speculation. His bone marrow is consistent with bone marrows previously reported. In a series of nine cases the bone marrow showed generalized hyperplasia of the erythroid, myeloid, megakaryocytic and reticulum cell elements with variable shift to the left.[4]

Hemolytic anemia in infectious mono is decidedly uncommon. About 40 cases of hemolytic anemia in infectious mononucleosis have been reported[5] since Dameshek reported the first case.[6]

At first it was felt that the anemia was secondary to hypersplenism.[7] However, it soon became apparent that other factors were involved. Coombs + and Coombs — hemolytic anemias have been reported. Recently, hemolysis has been attributed to cold agglutinins of the anit-i type.[8]

It now appears that the hemolytic anemia occa-

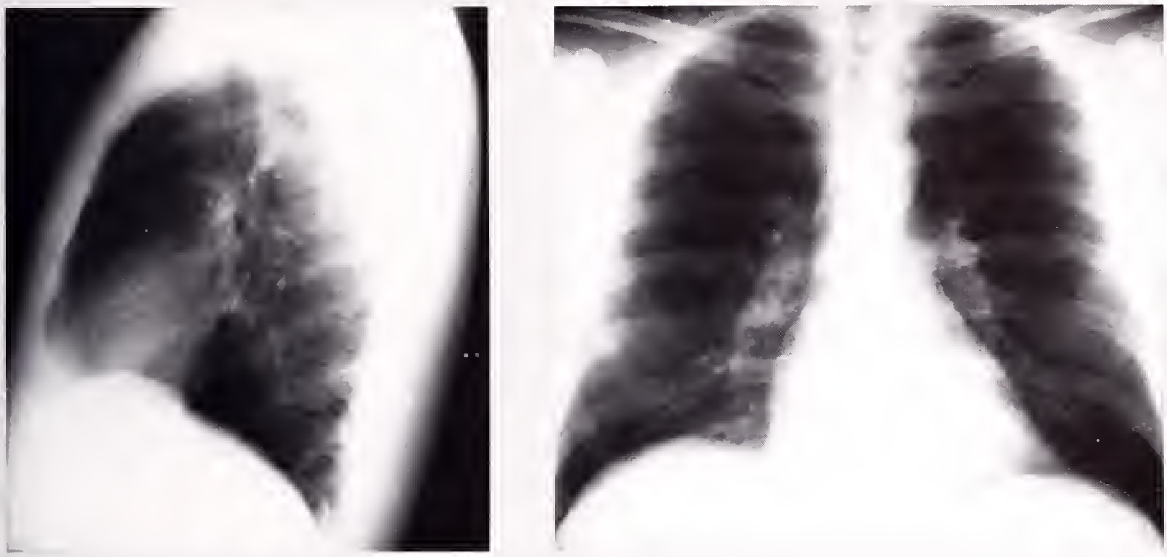

Figure 3. PA and lateral chest X-Ray one month after discharge. Note change in size of hilum.

sionally found in infectious mononucleosis has multiple etiologies. There may be increased destruction mechanically (hypersplenism, inapparent spherocytosis[9]), formation of IgG autoantibodies (Coombs + anemia), or IgM autoantibodies (cold agglutinins of the anti-i type).

Our patient probably had a hemolytic episode prior to admission producing icterus and anemia. Unfortunately we can only speculate about the etiology of this episode.

Hilar adenopathy on chest x-ray in patients with infectious mononucleosis is rare. A detailed description of the findings in 556 Army recruits fails to mention hilar lymphadenopathy in any chest x-ray, although it does describe pulmonary infiltrates indistinguishable from those described in atypical pneumonia in 16 cases. The infiltrates usually cleared very rapidly.[10] When hilar lymphadenopathy is present it is usually minimal.[11] Our patient had hilar lymphadenopathy of a striking degree which subsided with the infection. The presence of "potato nodes" on x-ray, which are sometimes felt to be pathagnomonic of lymphoma necessitated a biopsy to exclude neoplasia.

It is hoped that through this case report the reader will consider the possibility of infectious mononucleosis when next confronted with an ambiguous clinical situation such as this and in so doing, perhaps save that patient the trauma of a misdiagnosis.

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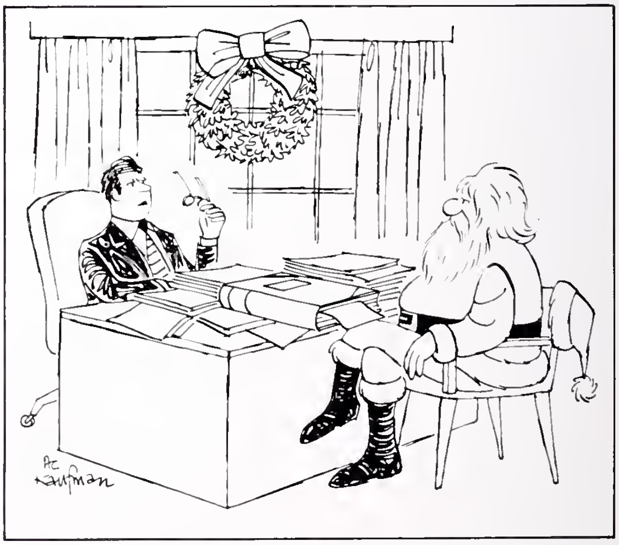

"There's only one way out – you've got to declare yourself a philanthropy as a tax shelter and apply for a federal grant."

Breast Cancer: A Systematic Approach

By Allen R. Soble, MD, F.A.C.P.
Sharon Wolf, MD
Southfield

Abstract

This article has endeavored to develop for the surgeon dealing with breast masses, a methodology of approach, both diagnostically and therapeutically. Emphasis is placed on acquiring familiarity with epidemiological and immunological factors in breast cancer and utilizing newer techniques (ER, CEA) whenever possible. Stress is also made on avoiding more mutilating surgery if disseminated cancer is detected post-biopsy; on the use of "prophylactic" chemotherapy with "curative" intent in patients with local disease in whom definitive surgery has been performed but considered "high risk" for later recurrence; and on dissemination by virtue of degree of nodal involvement, histology, primary tumor size and presence or absence of mononuclear infiltration. Finally, in patients with disseminated disease, none should be denied medical (hormonal or cytotoxic) therapy if judiciously applied.

Breast Cancer: A Systematic Approach

The dismal state of breast cancer has been summarized in the following paragraphs from the beginning of the breast cancer section of Holland's *Cancer Medicine:*

> "With the exception of skin cancer, cancer of the breast, at an incidence of over 65 per 100,000 population, far exceeds in frequency any other cancer in the female population. It has become the most common cause of death in women aged 40 to 44 and remains among the first three causes of death until age 60. The annual mortality caused by breast neoplasm is about 25/100,000 women.
>
> "Primary treatment by modern surgery and radiotherapy results in a 10 year survival of 57% for operable cases. Earlier diagnosis can improve these results. 70% of patients without axillary node involvement, but only 40% of operable cases with positive axillary nodes, survive 10 years. Size and histopathologic character of the neoplasm are correlated with curability."[1]

It is our hope that better results may be obtained. The objectives of this paper are the development of a systematic approach to the management of breast masses, thereby eliminating unnecessary and traumatic surgery when possible, and the presentation of a methodology of treatment once the diagnosis of breast cancer has been made.

I. Given the presentation of a new breast mass to the physician found either by the patient on self-examination or by the physician on routine examination:

   A. Consideration of known epidemiologic factors relative to carcinoma of the breast.

      1. Low frequency of breast cancer in women relating to the following situations:[2]

         a. History of pregnancy below the age of 20 years.
         b. Multiple pregnancies.
         c. Castration below age 37.
         d. Prolonged lactation.
         e. Low socio-economic status.
         f. Non-Caucasian females.

      2. Increased frequency of breast cancer in North American and North European women with reduced incidence elsewhere in the world.[3] In this setting, it is of interest to note the findings of Chabon[4] et al that in attempting to explain both the lower incidence and better survival rates of breast cancer in Japanese women, comparative histopathological studies were done in both Japanese and American women. They found a significant increase in the degree of lymphocytic infiltration at the periphery of the tumor and around small veins in the Japanese patients as contrasted to the American patients. This has been interpreted by many observers as representing an active cellular immune system implying better host resistance against tumor growth/spread. Further reference to this phenomenon will be made below.

      3. Consideration of increased frequencies of breast cancer in females with corpus luteum abnormalities.[5] Detailed hormonal studies suggest that inadequate corpus luteal function with insufficient cyclic progesterone secre-

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tion may allow unopposed and sustained estrogenic effect(s) on end organs (i.e., breasts) with resultant carcinogenic potential. Menstrual irregularities, infertility or late pregnancies may or may not be clinically evident in these patients.

4. Increased frequency of breast cancer in females with a positive history of breast cancer in female relatives at a risk factor of three to fivefold.[6]
5. Increased frequency related to oncogenic stimuli (for example, x-ray exposure of a prolonged nature in tuberculous female patients).[7]
6. A fourfold increased frequency in women with a prior history of benign breast disease including cystic disease and atypical lobular hyperplasias and duct papillomatosis.[8,9,10]
7. A prior personal history of breast cancer in the patient. Adair[11] et al have demonstrated a cumulative rate of clinical second primary breast cancers of 16.4% in a 30-year study involving 1,458 women with breast cancer.
8. Menopausal status at the presentation of the breast mass has significance in that it is estimated that whereas only one of six breast masses in premenopausal women is cancerous, approximately five out of six breast masses presenting in postmenopausal women are cancerous.[12]

B. Consideration of physical and mechanical factors in the diagnosis of the breast mass, such as skin fixation, retraction and edema, as well as firmness and mobility of the breast mass, in addition to evaluation of the results of mammography and thermography. There should also be a reevaluation of the concept of inoperability in the clinical diagnosis of "inflammatory carcinoma of the breast." Ellis and Teitelbaum[13] have amply demonstrated that the presence or absence of tumor emboli in the dermal lymphatics by skin biopsy should be the only criterion for the diagnosis of inflammatory carcinoma and that patients demonstrating the clinical appearance of "inflammatory carcinoma" but free of tumor emboli on biopsy, and subjected to "curative" surgery, had no diminished longevity rates compared with the usual "breast mass" patients, also subjected to definitive surgery.

C. After evaluation of epidemiological, historical and physical factors as presented in paragraphs A and B, decision is made as regards biopsy. It is reasonable to state that patients falling in any of the above categories in paragraph A from Item 3 through 8 should have prompt biopsy rather than a period of observation, especially in view of the fact that the doubling time of most breast cancers is approximately three months[14] and the morbidity and mortality risks of breast biopsy are minimal.

II. Given sufficient historical and physical findings to warrant breast biopsy, the following sequence should prevail:

A. Local excisional biopsy and then closure. There is no clinical evidence to indicate that initial biopsy intervention with later definitive surgery worsens the prognosis as regards dissemination in breast cancer.[15,16]

B. If lesion is benign, conclusion of the case is evident, although the reference made on I., A., item 6, should be kept in mind and on record in evaluation of future breast masses in this recently biopsied patient.

C. If biopsy shows carcinoma, the specimen should be subjected to analysis for estrogen binding receptors (ER). Recent studies[17,18] have indicated that the presence of ER in breast cancer tissue is associated with a 70% response rate to ablative hormonal surgery should dissemination occur at some later date, as opposed to less than a 5% response rate in the absence of demonstrable ER. At this time, evaluation for metastatic or disseminated breast cancer with the following studies prior to definitive breast surgery should be undertaken:

1. A thorough and meticulous history and physical examination, carefully looking for any symptoms of unexplained bony (often back) pain, headaches or organ enlargement such as hepatomegaly.
2. Standard laboratory procedures including chest x-ray, CBC with white blood cell differential (screening of peripheral blood film for normoblasts indicative of bone marrow involvement), ESR, SMA 12/60, CEA (carcinoembryonic antigen) and HCG (human chorionic gonadotrophin) as biological markers.[19,20] Immunoglobulins should also be performed looking for changes in these proteins having possible prognostic significance.[21]
3. Radioisotopic scans of bone, liver, brain, and if available, bone marrow.[22]

4. Percutaneous iliac crest bone biopsy and bone marrow aspiration, multiple and bilateral if the index of suspicion is high for metastatic bone disease, as well as liver biopsy if indicated by previously abnormal and borderline liver scan or liver function studies.

III. If the above evaluation for disseminated disease is positive, proceed with appropriate therapy for systemic disease with the addition of eradication of the bulk of tumor by simple mastectomy or, less preferably, radiotherapy, to heighten response to systemic therapy.[19] If the above evaluation is negative for metastases, proceed with mastectomy (standard or modified radical) as customarily employed. If multiple axillary lymph nodes are positive (three or more), the probability of disseminated disease in the future is substantially increased and the recurrence rate is even higher as the primary tumor mass in the breast approaches five cm. in size. Adair[11] et al have demonstrated statistically that survival rates in 1,458 cases of breast cancer relate closely to nodal (axillary) metastases with tumor size as a second variable. Tumors of less than two cm. with negative axillary lymph nodes had an 80% 10-year survival rate and on the other end of the spectrum, tumors of five cm. or greater with positive regional lymph nodes had a 5% 10-year survival rate. It was almost an arithmetic straight-line projection between these two extremes. Survival also related in part to the level of axillary lymph node involvement with the highest or apical lymph nodes showing the worst prognosis if involved. Tumor histology was significant in that the less common carcinomas, namely, comedo-, papillary, medullary and colloid (mucinous) had better prognoses given the same variables relative to tumor size and nodal involvement, while infiltrating duct carcinomas (74% of the total breast cancers in this series) had significantly worse prognoses. (For example, 30-year survival rate of comedo- to infiltrating duct carcinomas was 74% versus 33%). An interesting correlation showed Grade III-IV duct carcinomas of 29% 30-year survival whereas the same histology of Grade II-IV duct carcinomas with plasma cell borders had a 49% 30-year survival. These latter figures once more appear to indicate the importance of an intact and active immune (cell mediated) surveillance system in preventing tumor growth and/or spread. Therefore, in these high risk situations described above:

1. Postoperative radiotherapy is delivered as usually employed to prevent local tumor recurrence after prior testing with DNCB. Eilber and Morton[23] and others[21,24,25] have demonstrated that delayed cutaneous hypersensitivity to various contact allergens including DNCB (2, 4 dinitrochlorobenzene) as an expression of cell mediated immune reactivity was significantly depressed in cancer patients with ultimately bad prognoses. In Eilber's studies, greater than 95% of normal controls (patients free of malignancy) showed normal reactivity to DNCB. (Patients over 70 years of age were excluded because of decline of immunological reactivity with advancing age.) 93% (27 out of 29) of cancer patients failing to react to DNCB were inoperable or developed early recurrence, whereas 92% (50 out of 54) of postoperative cancer patients reacting to DNCB were free of recurrent disease for at least six months. These prognostic figures may influence the aggressiveness with which the chemotherapy in item No. 2 below is carried out. A well controlled study correlating DNCB activity in degree of mononuclear cell (lymphocyte and plasma cell) infiltration in breast cancers would be of great interest in this regard.
2. Intermediate term (six to nine months) chemotherapy for hopeful complete eradication of potential disseminated tumor nidi (micrometastases), most probably employing a modified Cooper's regimen using five flourouracil, Cytoxan and methotrexate or a combination of Cytoxan and Adriamycin.[14,19] Kholdin[26] et al showed a substantial increase in five year survival rates in women with multiple axillary lymph node metastases by the use of high dose, intermittent (pulse) type of cytotoxic chemotherapy (Cytoxan and Thio-Tepa) rather than chronic daily administration in order to theoretically interfere with cellular kinetics at vulnerable times in the growth of the tumor.
3. Consideration of immunotherapy after the delivery of the above described chemotherapy employing the concept of eradication of minimal residual disease.[27] This must be considered investigational at present.
4. Vigorous follow-up observation with appropriate x-rays, organ scans and biological markers to detect possible early systemic dissemination and to be diligent in detecting possible second primary breast cancer in the patient. Current recommendations for re-examination of the remaining breast for development of a second primary cancer indicate semi-annual evaluations with mammography.[28]

IV. The treatment of the disseminated disease is not within the scope of this paper, but a number of new agents are worthy of mention. Hormonally active agents, including antiestrogens,[29,30] progestational agents,[31,32] as well as high dose androgens,[33] are currently being employed with possibly increasing effectiveness in the control of recurrent distant metastases. Levodopa, known for its anti-Parkinsonian activity, has been described as having prolactin-suppressing abilities and therefore has been recommended as a predictor of a favorable clinical response to hormonal ablative surgery in patients demonstrating relief of bone pain with its administration.[34] The relationship of prolactin levels to human breast cancer has been challenged by other authors.[35] Aminoglutethimide, a derivative of glutethimide (Doriden), has been shown to produce a reversible inhibition of the enzymatic conversion of cholesterol to pregnenolone, a step required for the biosynthesis of all adrenal steriod hormones, including estrogens.[36] With this rationale of induction of a medical adrenalectomy, its use along with corticosteroid replacement, has offered some encouraging responses to date.[37,38] In the area of cytotoxic chemotherapy, the addition of Adriamycin to the armamentarium with response rates of greater than 50% as a single agent[39] are certainly hopeful as well as the now familiar five-drug combination program (Cooper's regimen)[40] giving response rates of 50-90% and being actively studied in Phase III clinical trials by several cooperative groups.

With the exception of chorio carcinoma and the hematologic neoplasms, there are few malignancies in clinical medicine as responsive to various modalities of therapy at the various stages in its biological evolution as breast cancer. No longer should "a quick frozen and radical" be considered the standard of medical care for these patients.

The above discussion was not intended to be a comprehensive in-depth analysis of multivariate factors of breast cancer but rather an informed presentation to the general physician and surgeon in a sequential, stepwise program incorporating present medical knowledge of this condition. Hopefully, in a manner such as this may the physician better serve his patient with breast cancer.

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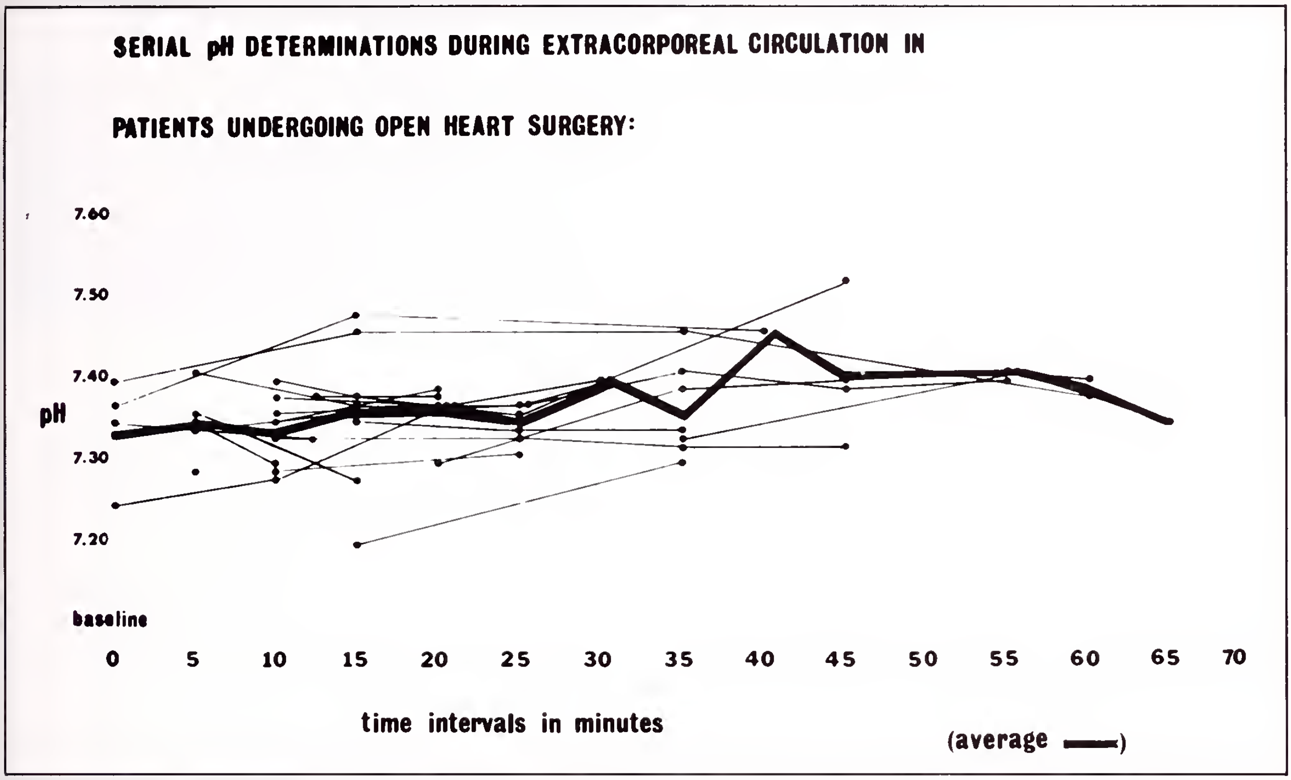
The figure below was inadvertently omitted from the article, "Potassium and Extracorporeal Circulation," by Gerald C. Timmis, MD, et al., in the September issue of Michigan Medicine.



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Questions about the new arbitration alternative for settling doctor-patient disputes in Michigan may be directed to Gerald E. Butler, MD, Ann Arbor, left; Rhoda Powsner, MD, Ann Arbor, or George Chatas, MD, Ann Arbor. They, Larry W. Fitzsimmons, MD, Lansing, and Donald Baltz, MD, Dearborn, have been designated by the new Michigan Arbitration Advisory Committee to the Insurance Bureau to lead physician education efforts.

Michigan's Arbitration Statute

The New Law and Its Effect On Physicians

By Judith Marr
Managing Editor

Voluntary contractual binding arbitration, as an alternative to courtroom litigation and expense, will be available in Michigan as of Jan. 1. Michigan Medicine *offers the following information in question and answer form to help Michigan doctors better understand and use the new arbitration plans.*

Q. What is the background of the new arbitration statute?

A. In July, 1975, Gov. William Milliken signed into law PA 140, which establishes a voluntary arbitration system for use in medical malpractice allegations. The new legislation was recommended by a key portion of the Dively-Demlow Report on the medical malpractice situation submitted earlier in the year to the Governor. PA 140 was one of 13 bills signed this year as part of a "malpractice package" designed to improve the malpractice litigation climate. The arbitration bill was supported by a coalition composed of the UAW, Catholic Conference, State Chamber of Commerce, State Bar Association, MSMS, Michigan Hospital Association, Physicians Crisis Committee, AFL-CIO and others.

Q. What are the provisions of PA 140?

A. PA 140 amends the Revised Judicature Act to establish a system to provide for the arbitration of a dispute, controversy or issue arising out of or resulting from injury to, or the death of, a person caused by an alleged error, omission, or negligence in the performance of professional services by a health care provider, hospital, or their agent, based on a claimed performance of such services without consent, in breach of warranty, or in violation of contract."

The bill requires that a person who receives health care in a hospital be allowed to execute an agreement to arbitrate any subsequent malpractice dispute. A hospital, however, may not require an agreement as a prerequisite to health care treatment. The person receiving treatment, but not the hospital, may revoke the arbitration agreement within 60 days after discharge.

All surgical and medical procedures performed by a participating physician in a hospital shall be covered by the terms and conditions applicable to the agreement between the patient and the hospital.

Arbitration contracts covering office and ambulatory care not in-hospital may be executed annually by physician and patient. In such cases, the 60-day "opt-out" provision is from date of execution. Such contracts are valid for one year only; in the hospital, new contracts must be executed for each admission.

Q. When does the new law go into effect?

A. PA 140 goes into effect Jan. 1, 1976.

Q. What will I, the physician, have to do under the new act?

A. The physician has the option to offer an arbitration agreement in his own office to each patient. He is not required to do so. Hospitals must offer arbitration agreements to all patients at each admission, except in certain cases of sequential treatments scheduled. Hospitals are required to show 75 percent of admitting physicians covered by arbitration agreements within the first year after the new law takes effect, and 90% after three years.

Q. How will the arbitration procedure work?

A. Either party, subject to the statute of limitations requirements, has the right to file for arbitration. After the proceeding is initiated, periods of time are allowed for both parties to ask, receive and file pertinent written information. The parties must agree on three neutral arbitrators, who shall be an attorney as chairman, physician preferably of the respondent physician's specialty, and a public person. The arbitrators then must collect all information they need within six months after the proceeding is begun. When they complete their work, an informal private hearing is scheduled, to include oral testimony, presentation of evidence, briefs and expert witness testimony as needed. The arbitration panel then has 30 days to render an award, which may include remedial care as well as dollars. There are no limits on the awards.

Q. Can an award be appealed?

A. Only limited appeal is allowed. It cannot be based on the merits of the case, but only on the misconduct or bias of the arbitrators or procedural errors of the arbitration proceedings.

Q. How will the arbitrators be found?

A. Some interested lay, medical and legal representatives will apply to serve as arbitrators; others will be solicited by the American Arbitration Association. MSMS, the state bar and other associations have been asked for their recommendations. The criteria now being developed for the American Arbitration Association by the Michigan Arbitration Advisory Committee will be used to measure candidates, who will be named to a list of potential arbitrators, from which the three-member panels will be selected by the parties to each arbitration proceeding.

Q. What is the Michigan Arbitration Advisory Committee and what is its role?

A. The 18-member committee is required by PA 140 to assist the Insurance Commissioner in his communications with public and professionals. MSMS representative on the committee is Rhoda Powsner, MD, Ann Arbor. Other committee members represent the legal profession and the public. This fall, the committee has been developing manuals and instructional materials for the parties to be involved in arbitration proceedings and has scheduled five regional meetings to educate physicians and hospitals on the provisions of the new arbitration statutes. It has been developing criteria and qualifications to help the American Arbitration Association in selecting arbitrators.

Q. Why should a patient want to sign an arbitration agreement form?

A. Disputes will be settled faster than through court proceedings. The patient can represent himself and get retribution easier for small-award cases, which attorneys may not be interested in. The panel of experts may create a more favorable atmosphere for the claimant. The rewards for remedial care, not possible under court proceedings, which award only dollars, may be worth more in the long run to the wronged patient.

Q. What if a patient refuses to sign an arbitration agreement?

A. The signing or non-signing of an arbitration agreement is not a precondition for treatment. It can't be used as a lever in any way and may not have any effect on the patient's care. A doctor withholding treatment from a patient because the patient won't sign an agreement may have his malpractice insurance revoked.

Q. Who will pay the cost of arbitration proceedings?

A. If a patient, as claimant, wishes to start a proceeding, his fee will be paid, at least initially, by the new Michigan Arbitration Administration Fund. The physician, as defendant or respondent, or his insurance company, must pay a fee of $200 for the proceedings to begin. New PA 141 creates the Arbitration Administration Fund, which will pay the cost of arbitration proceedings, including the fees of the arbitrators. Money for the fund will be obtained by an assessment against all insurance companies selling malpractice insurance in the state, prorated on each company's share of the malpractice market. It can be assumed the insurance companies will be allowed to pass this charge along in premiums. Normal out-of-pocket expenses a party involved in arbitration can expect are: (1) his own legal fees; (2) the cost of official transcripts if any, and (3) his own expert witness fees. These costs usually are borne by the insurance company as part of defense costs.

Q. What will be the effect of the new arbitration law and proceedings on my practice?

A. First, the threat of malpractice litigation should be lessened for the Michigan physician. Second, a major effect of the new law will be a new emphasis by the Insurance Bureau to encourage patients to discuss problems promptly with the physicians. Third, the commission is mounting a major effort to prevent disputes from ever having to be decided by a third party, whether arbitration panel or the courts. The Insurance Bureau currently is setting up models of grievance systems for use in disputes which arise from in-hospital care, and are the source of nearly all of the suits filed. The prime interest of the new arbitration system will be the prevention and early settlement of claims, according to Michael Arford, director, Michigan Medical Malpractice Arbitration Program, American Arbitration Association.

PEOPLE

Richard J. Allen, MD, Ann Arbor,

is new president-elect of the Child Neurology Society. He is head of the Section of Pediatric Neurology at University Hospital, Ann Arbor.

Peter H. Abbrecht, MD, PhD, Ann Arbor,

is beginning a new four-year term with the National Advisory Research Resources Council. He is professor of physiology and chairman of the Bioengineering Program at the University of Michigan.

Leonard F. Bender, MD, Ann Arbor

is new medical director of Rehabilitation Institute, Detroit, and new professor and chairman of the Department of Physical Medicine and Rehabilitation at Wayne State University. He succeeds Joseph H. Schaeffer, MD, in both positions. Doctor Schaeffer will continue to serve as president of the Institute.

Chester J. Bogucki, MD, Pontiac,

is new medical services director for the Macomb-Oakland Regional Center of the Michigan Department of Mental Health. He formerly was associated with the Crippled Children Services Division of the Michigan Department of Public Health.

Andrew Climie, MD, Detroit

clinical associate professor at the Wayne State University School of Medicine, is newly appointed chief of pathology for both Grace and Harper hospitals. He also is new vice president of the Detroit Medical Club.

John A. Churchill, MD, Detroit

is a new member of the Rare and Endangered Species Committee of the State of Michigan Department of Natural Resources. He is a neurology professor at Wayne State University School of Medicine.

John J. Coury, MD,

MSMS past president, is a new AMA representative to the new American Bar Association Commission on Medical Professional Liability.

Robert M. Daugherty, MD, East Lansing,

is new president of the Michigan Heart Association. He is director, Office of Curriculum Implementation, with the MSU College of Human Medicine.

Reed O. Dingman, MD, Ann Arbor,

was honored recently with a special weekend of activities planned in his name by friends and colleagues. The weekend included scientific seminars, the 29th annual William J. Mayo lecture, and a banquet. Doctor Dingman is former head of plastic surgery at University Hospital and St. Joseph Mercy Hospital, Ann Arbor, and is professor of surgery and associate professor of oral surgery with the University of Michigan.

Saeed M. Farhat, MD, Ann Arbor,

is new president of the Michigan Association of Neurological Surgeons. Doctor Farhat is head of the St. Joseph Mercy Hospital Department of Neurosurgery.

Fulvio Ferrari, MD, Caro,

is new regional medical administrator of Southeast Michigan mental health services. Doctor Ferrari until recently was director of the Thumb Treatment Assistance Center, Caro.

John L. Fischetti, MD, formerly of Suffolk, Va.,

is new director of clinical development for Parke, Davis and Co. He succeeds George H. Tarr, MD, recently appointed director of medical information for Parke, Davis.

John A. Gronvall, MD, Ann Arbor,

dean, University of Michigan Medical School, is new chairman of the Council of Deans of the Association of American Medical Colleges. He will serve a one-year term.

Jay K. Harness, MD, Ann Arbor,

is the first director of a new health services division for the Michigan prison system. Doctor Harness continues on the general surgery faculty at the U-M.

Charles Jeffries, MD, and William Rush, MD, Detroit,

are new assistant dean and associate dean, respectively, for curriculum affairs of the Wayne State University School of Medicine.

Arthur J. Johnson, MD, Detroit,

is new president of the Detroit Surgical Society. He is a urologist at Detroit Medical Center hospitals. Thomas M. Flake, MD, Detroit has been named DSS president-elect.

Gerrit J. Kemme, MD, Drenthe,

who has served over 40 years, is the "Physician of the Year" of the Michigan Academy of Family Physicians. He is a fellow of the AAFP, twice president of the Ottawa County Medical Society, past president of the West Michigan

Academy of Family Physicians and current chief of staff at Zeeland Hospital for the third time.

Paul T. Lahti, MD, Royal Oak,

is new president of the Michigan Society of General Surgeons.

Kim K. Lie, MD, Detroit,

is president-elect of the American Association for Hand Surgery. He is a clinical instructor of surgery for the WSU School of Medicine.

Thomas J. Petrick, MD, Saline,

is new associate director of clinical therapeutics at the research labs of Parke, Davis and Company in Ann Arbor.

Walter D. Meester, MD, Grand Rapids,

has been reappointed to a three-year term on the Advisory Commission of Substance Abuse Services. The 11-member commission is the state advisory body to the Office of Substance Abuse Services.

Fazlolah Nickhah, MD, Ypsilanti,

served recently as team physician for the U.S. Junior World and Senior World wrestling teams when they competed in August in Bulgaria and in September in Russia, respectively. Doctor Nickhah has served in the past with U.S. Olympic teams.

J.C. Rosenberg, MD, Detroit,

is a charter member of the American Society of Transplant Surgeons and the chairman of its bylaws committee. He is professor of surgery at WSU School of Medicine.

Earl J. Rudner, MD, Southfield,

is a new member of the editorial board of *Contact Dermatitis,* a new journal. He is associate professor of dermatology at WSU School of Medicine.

Joseph N. Schaeffer, MD, Detroit,

is a new member of the Task Force on Long Term Care of the state Office of Health and Medical Affairs and the State Health Planning Advisory Council. He is chairman of physical medicine and rehabilitation at WSU School of Medicine.

Lee B. Stevenson, MD, Detroit,

is a new member of the AMA Section Council on Obstetrics-Gynecology.

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Certified for: Medicare and M.A.A. programs

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Robert L. Fransway, M.D.
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Jacob J. Miller, M.D.
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David L. Reive, M.D.
Gerard M. Schmit, M.D.
Joseph J. Tiziani, M.D.
Prehlad S. Vachher, M.D.
Richard D. Watkins, M.D.
Robert M. Zimmerman, M.D.

John Tanton, MD, Petosky,

is new president of the national Zero Population Growth organization. An ophthalmologist, he also is national population chairman of the Sierra Club and has served as a member of the Michigan Wilderness and Natural Areas Gubernatorial Advisory Board.

Kazuo Ugajin, MD, Niles,

is the recipient of a humanitarian award from the V. J. Sarte National Hydrocephalus Research Foundation, for his work in helping to form the foundation.

Ignatius Voudoukis, MD, Detroit,

is new president of Hypertension Coordinating and Planning Council of Southeastern Michigan.

Alexander J. Walt, MD, Detroit,

is new president of the Mayo Alumni Association of Michigan. He also is secretary of the Central Surgical Association and vice president of the American Association for the Surgery of Trauma.

Paul T. Werner, MD, Escanaba,

is new preceptor-medical director of the Escanaba Family Health Center. He also will serve as an assistant professor of family practice for MSU at the new center.

John G. Wiegenstein, MD, Lansing,

is the first recipient of the Meritorious Achievement Award of the American College of Emergency Physicians. He was recognized for his pioneering efforts to establish standards of practice in the field of emergency medicine. In addition, the award, which will be annual, has been named in his honor. Doctor Wiegenstein is director of the Ingham Medical Hospital emergency department and of the emergency medicine residency program there.

Hermann Ziel, Jr., MD, Lansing,

is new president of the Michigan Society of Obstetricians and Gynecologists. He is chief, Bureau of Health Facilities, Michigan Department of Public Health.

***IMPORTANT INFORMATION:** This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or Narcan® (naloxone HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.*

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with special caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis. In severe dehydration or electrolyte imbalance, withhold Lomotil until corrective therapy has been initiated.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage. Use with care in patients with acute ulcerative colitis and discontinue use if abdominal distention or other symptoms develop.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing, hyperthermia, tachycardia and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria, paralytic ileus, and toxic megacolon.

Dosage and administration: ***Lomotil is contraindicated in children less than 2 years old.*** Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, hyperthermia, tachycardia, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. A narcotic antagonist may be used in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. Liquid, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

SEARLE **Searle & Co.**
San Juan, Puerto Rico 00936

Address medical inquiries to:
G. D. Searle & Co.
Medical Department, Box 5110,
Chicago, Illinois 60680

455

When diarrhea has him reeling...

Diarrhea can hook anyone. When it does, physicians and patients both want prompt control of diarrheal symptoms. Lomotil will usually control diarrhea promptly.

This rapid action can halt the emergency aspect of diarrhea and is comforting and reassuring to the patient. Electrolyte and fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate specific therapy should be given along with Lomotil.

Lomotil is contraindicated in children less than 2 years old.

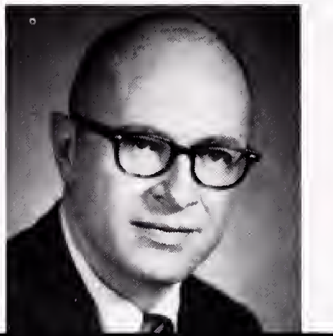
Lomotil® TABLETS LIQUID

Each tablet and each 5 ml of liquid contain diphenoxylate hydrochloride 2.5 mg (Warning: May be habit forming), atropine sulfate 0.025 mg

holds the line.

Opinion & Dialogue

Should a specially prepared package insert be made available to patients?



Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration

The idea of a so-called patient package insert has been around fo a long time. Many physicians alrea use written instruction sheets to provide patients with information about the drugs they are taking. An some physicians give verbal instruc tions; but in too many instances these are what I call eye-glazing exercises. I have seen patients sit wit glazed eyes listening to a rapid-fire lecture by a hurried physician who has 20 people out in his waiting room. These patients aren't given sufficient understanding and therefore do not follow instructions. So I think the idea of an official packag insert for patients is a good one. Perhaps we should really think of this kind of information simply as extension of drug labeling.

The benefits of patient involvement

Many physicians may not rea ize how frequently a patient obtain his drug information from Aunt Tillie or the next door neighbor. Ar this information is almost always bad or irrelevant to the case at har Furthermore, the incentive to go along with a prescribed program i slim if the only reading matter the patient receives, along with his pr scription, is a bill.

As an educator I am impress by the principle that the best way get someone to do something is to involve him in the process. So the

Dr. James H. Sammons
Executive Vice President
of the American
Medical Association

I think there are advantages well as some real disadvantages i a patient package insert. When yo begin to use semi-medical or med cal terms to describe complicatio or possible sequelae of disease or treatment, you may frighten the p tient—particularly since the more highly sophisticated patient is not the one who is going to read the ir sert. The patient who will read it i the one most susceptible to fright and confusion by the language.

On the positive side, a packa insert will probably give the patie better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove fro the physician the need or obligati to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should b warned of the possibility of seriou side reactions—to know what the real dangers are. But it doesn't d bit of good to indicate that a patie on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that frigh engendered by the insert may po sibly outweigh the potential good

main purpose of drug information for the patient is to get his cooperation in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass information from physicians, medical societies, the pharmaceutical industry and centers of medical learning. The ultimate responsibility for uniform labeling must, however, rest with the Food and Drug Administration. There is nothing wrong with this agency saying, "this information is generally agreed upon and therefore it should be used," as long as our process for getting the information is sound.

Distribution of the information is a problem. In great measure it would depend on the medication in question. For example, in the case of an injectable long-acting progesterone, we would think it mandatory to issue two separate leaflets—a short one for the patient to read before getting the first shot and a long one to take home in order to make a decision about continuing therapy. In this case, the information might be put directly on the package and not removable at all. But for a medication like an antihistamine this information might be issued separately, thus giving the physician the option of distribution. This could preserve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socioeconomic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

Only the doctor can remove that fear by 20 or 30 minutes of conversation.

I'm not suggesting that we withhold any information from the patient because, first of all, it would be totally dishonest and secondly, it would defeat the very purpose of the insert. I do think that a patient on the birth control pill should know about the incidence of phlebothrombosis.

If you're going to tell a patient the incidence of serious adverse reactions, then you have to tell him that a concerned medical decision was made to use a particular medication in his situation after careful consideration of the incidence of complications or side effects.

Emotionally unstable patients pose a special problem

There are patients who, because of severe emotional problems, could not handle the information contained in a patient package insert. Yet if we are going to have a package insert at all, we just can't have two inserts. I think we might simply have to tell the families of these patients to remove the insert from the package.

Legal implications of the patient package insert

Just what effect would a patient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

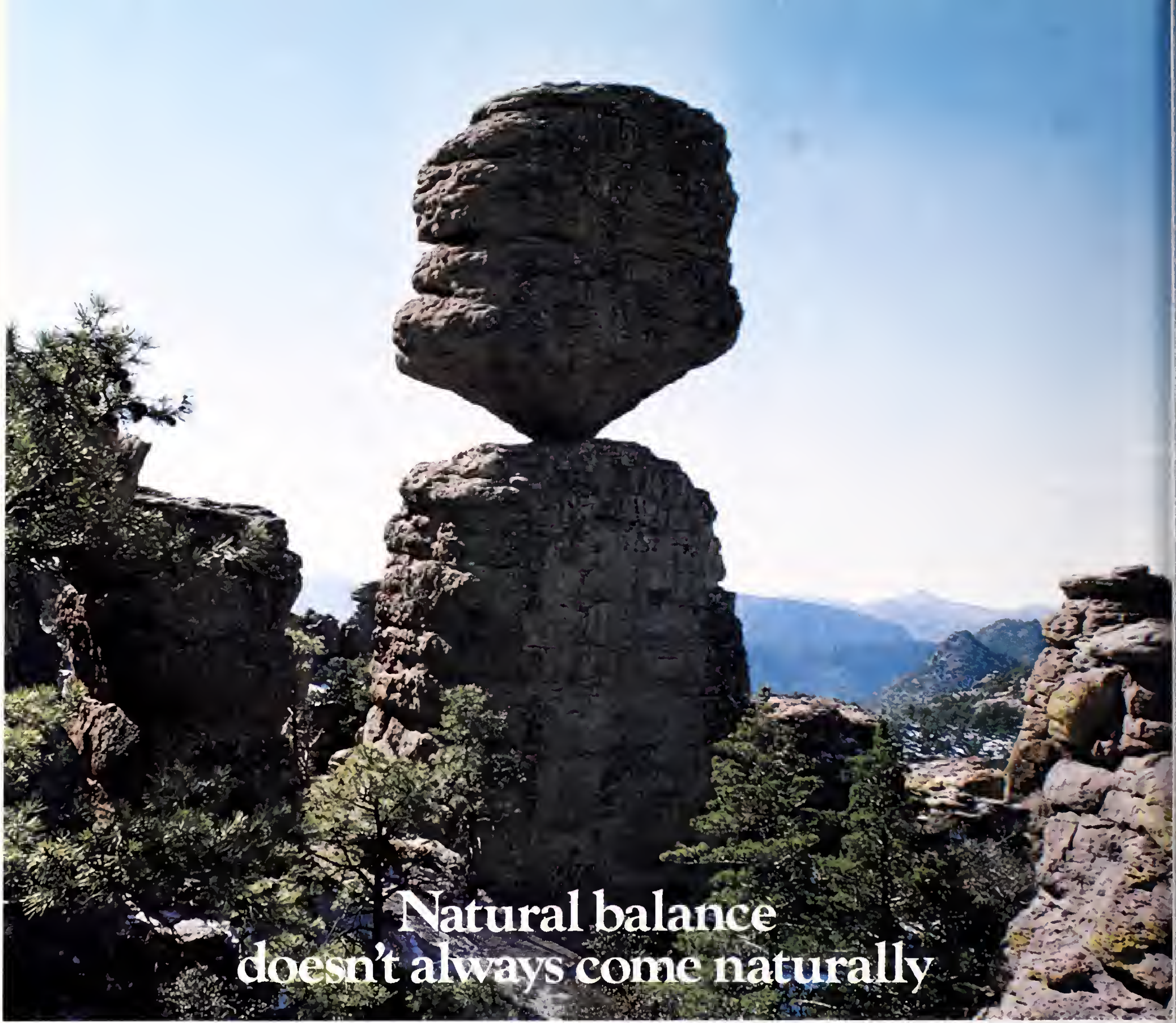
Preparation of the package insert

The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005



Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

☐ Found useful in the management of vertigo* associated with diseases affecting the vestibular system.

☐ Can relieve nausea and vomiting often associated with vertigo.*

☐ Usual adult dosage for Antivert/25 for vertigo:* one tablet t.i.d.

☐ Also available as Antivert (meclizine HCl) 12.5 mg. scored tablets, for dosage convenience and flexibility.

☐ Antivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for nausea, vomiting and dizziness associated with motion sickness.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pr nancy or to women who may become pregnant is contraindicated in view of teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestat has produced cleft palate in the offspring. Limited studies using doses of over 100 m kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft pal Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hyp sensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patie should be warned of this possibility and cautioned against driving a car or operat dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in child have not been done; therefore, usage is not recommended in the pediatric age group

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blur vision have been reported.

More detailed professional information available on request.

ROERIG Pfiz
A division of Pfizer Pharmaceut
New York, New York 10017

Antivert®/25
(meclizine HCl) 25 mg. Tablets
# for vertigo*

Many Medical Libraries Now Can Help Doctors Through Computer Service

Affiliated libraries throughout Michigan now offer computer-based bibliographic search service for all biomedical literature indexed by Index Medicus. "Medline" is the overall name given to the on-line computer searching in biomedicine, but at present "Medline" is actually composed of two major data bases:

1. The Medline data base contains citations from 2,900 medical and science journals covering the last two years up to the present month. These citations are available on-line at affiliated institutions' terminals. When there are too many citations to print out at the terminal, some (usually 25) are printed on-line, the rest, off-line and mailed to the patron.
2. The Backfile data bases contain citations from these same journals from 1969 to the point at which the Medline data base begins. These citations are printed off-line and mailed to patrons directly from the National Library of Medicine within a matter of days.

The purpose of Medline is to allow patrons (doctors, nurses, health services administrators, researchers, allied health personnel — anyone with a need for biomedical bibliography) access to a central computer at the National Library of Medicine in Bethesda, Maryland, and, with the help of a trained Medline searcher, to "converse" with the computer in order to retrieve bibliographies to meet individualized information needs.

The computer recognizes some 10,000 terms from a structured vocabulary list, terms which can be combined to search on any combination of subjects. The computer can also search on author names, title words, specific journals, language and time span. Bibliographies contain authors, article titles, and journal sources.

Since Medline is a federally subsidized service, the cost to physician or affiliated institution is nominal. Librarians can supply further information. Physicians not affiliated with an institution, or institutions without librarians may contact any of the following Medline Centers and learn how to make use of Medline to fill research needs:

1. Reference Department
   Science Library
   Michigan State University
   East Lansing, Michigan 48824
   (517) 353-9591
2. Medical Center Library
   4400 Kresge Medical Research
   Building
   University of Michigan
   Ann Arbor, Michigan, 48104
   (313) 764-1210
3. University of Detroit School of
   Dentistry Library
   2985 East Jefferson Avenue
   Detroit, Michigan 48207
   (313) 961-4141 ext. 297
4. Shiffman Medical Library
   Wayne State University
   4325 Brush Street
   Detroit, Michigan 488201
   (313) 577-1094

Testifies in Washington

Doctor Masters Suggests Ways To Improve Health Care Now

Brooker L. Masters, MD, Fremont, recently told the congressional Ways and Means Subcommittee on Health that four evolutionary changes now would correct some of the present health care inequities.

Appearing personally in Washington to testify, Doctor Masters advocated (1) coverage now of catastrophic illness, (2) inclusion now of preventive medical care, (3) care now of the chronically ill, and (4) "research — free and unfettered."

Doctor Masters voiced deep concerns about any national health insurance proposal that would become a great burden on the taxpayers, or an ominous threat that lower quality will result. There is no limit to the public's demand for medical care and no country can finance everything that the consuming public might want," Doctor Masters said.

"Congress should decide what it wants our health care system to do, and then determine priorities since we cannot do everything at once," Doctor Masters said.

Will You Serve as Doctor of the Week?

By John A. Richards
MSMS Staff

Once again MSMS is calling for volunteers to serve in its Doctor of the Week Program. Every year, 20 Michigan physicians agree to spend one week each, from Tuesday through Friday, with the state legislature as lobbyists for the medical profession.

The program grows in popularity each year as more and more physicians realize how important the legislature is in their personal and professional lives.

But the doctor who is thinking about volunteering must be careful! He may find his life changed.

The one overriding change in a person's perspective after a Doctor of the Week stint is that he or she becomes increasingly involved in the issues of the day. The spirit and commitment of the people charged with making the laws of the state is contagious, and each doctor of the week has expressed increased commitment to getting involved. In addition, the experienced doctor of the week is no longer satisfied with just reading about issues after actually affecting the outcome of events.

All past doctors of the week have one thing in common — a desire to learn and effect legislation. Usually, volunteers in the program already have taken an active interest in politics, either through the numerous opportunities offered by the state medical society or independently. However, it is not uncommon for the time spent as doctor of the week to be the MD's first experience in politics.

The doctor of the week must enjoy meeting people, for the physician soon learns that the best way to learn the most in the shortest period of time is to get to know the senators and representatives personally. Personal contact is the basis of the whole program.

The almost continuous contacts with legislators serve many purposes. First and foremost, it creates understanding between the medical profession and the men and women that make the laws. Previous doctors of the week say they feel they can easily contact the people they have met during the week and express their opinion on issues and really be heard.

It soon becomes apparent to the doctor that legislators are capable of seeing the many different sides to an issue. Many times our amateur lobbyist is surprised at the amount of knowledge a legislator has on an issue and the amount of reasoning that has gone into his position on a given subject. Frankly, this is often the most difficult thing that a physician in the program has to learn when he starts. There is always more than one side to an issue. It is the legislator's job to weigh the different points of view and make a decision that not only solves the problem but is equitable to the many parties involved.

If you are willing to experience this rich opportunity, Doctor, please volunteer for the 1976 Doctor of the Week Program. MSMS plans to schedule physicians for the entire legislative session, from the first of February to the end of June.

The doctor of the week will spend from Tuesday morning to Friday with the legislature. His or her hotel and expenses will be paid by MSMS and he or she will be given an extensive briefing before going down to the Capitol, to ensure an understanding of the issues before the legislature at the time.

Most of the doctor's meals will be scheduled in advance, generally with the doctor's local legislator, who often brings some of his colleagues along. The rest of the time the doctor will visit legislators in their offices, attend committee meetings, or observe House and Senate in session. In addition, the doctor may be asked for an informal opinion on issues concerning medicine, or anything else.

Most doctors in the program say it's a lot of work, but a lot of fun.

Anyone interested in volunteering for the program will find an application available from the county medical society, or may contact John Richards at MSMS headquarters (517) 337)-1351.

Reflections on Physicians As Lobbyists

By Reuven Bar-Levav, M.D.
Detroit

Several days spent in Lansing recently as a Doctor of the Week were not only an enjoyable and fattening experience, but also an enlightening one. The change of pace from a crowded and rigid office schedule to the seemingly disorganized life of a lobbyist was not only difficult but also exciting. There, in the lobbies and corridors of the Capitol Building, business is carried out informally through brief encounters, over lunch or dinner and in intimate tete-a-tetes on the Senate or House floors.

Most legislators were receptive, open and easy to approach. A few became outright friendly. The "Doctor of the Week" program is well established, and even with only minimal personal contact, chairmen were often willing to interrupt their committee deliberations to greet the representative of Michigan's physicians. Friendly legislators invited this writer onto the floor of the Senate and officially welcomed him as part of the day's proceedings.

The personality of the "Doctor of the Week" is no less important than the group he represents. Personal channels of communication remain closed, except for formal or cordial contacts, unless the doctor can comfortably mix with strangers and unless he finds it enjoyable to get to know other human beings. There is no room for back-slapping jolliness, but neither is a taciturn, somber and withdrawn lobbyist likely to do much good. Before a physician volunteers for participation in the program he or she ought to ask himself how comfortable he is in meeting new situations and new people.

My biggest and most pleasant surprise was the discovery that, in general, the caliber of the legislators, both in Senate and House, was much higher than I expected. Most of these often-maligned "politicians" turned out to be hard working individuals, at least during the three days per week they are in session. Many spend long hours conscientiously attending to the business entrusted to them. Much hard and detailed work is usually required for the discharge of even relatively minor legislative matters. While most legislators, like us all, are not entirely pure, they are also not the handmaidens of interest groups and power blocks as they are often pictured. Even legislators known to be in sympathy with groups that are generally hostile to organized medicine were willing, more than once, to lend an attentive and respectful ear, and they were also willing on occasion to make concessions that were dictated by reason and by reality.

The password is survival. It is hidden only slightly beneath the surface. All but a few of the oldest and the most senior legislators and lobbyists are engaged in a constant struggle to maintain themselves in the positions in which they find themselves, improve them if possible, and in any event prevent slipping and falling behind. This applies also to the legislative workers of the

Doctor Bar-Levav

A scene doctors of the week are privy to – a note on the floor of the Michigan Senate.

Michigan State Medical Society in Lansing, who must "deliver the goods" to justify their existence.

A sense of tension and anxious existence unites legislators, ex-legislators and lobbyists, and they share the recognition of having a common fate. A camaraderie similar to that found among remotely stranded survivors has developed, resulting in a continuous give and take, to satisfy the various constituencies and to help each other survive personally. This camaraderie may well be the reason that propels lobbyists sometimes to recommend the acceptance of compromise positions that seem to fall short of the achievable. The leadership of organized medicine must learn to recognize this state of affairs for it may be possible, especially on important occasions, to push for and obtain better results than those recommended as the "best."

The efforts of organized medicine in the State Legislature are designed not for the narrow benefit of physicians alone, but they are often concerned with maintaining and providing conditions that would encourage the practice of good and humane medicine, thus serving a much larger constituency than the profession. The malpractice insurance crisis serves as a good example. Physicians have been victimized first, but in the long-run patients would have to foot the bill. When the constituency that backs our efforts is larger than usual, our voice can also be louder, clearer and more persistent. Legislators usually understand this principle better than physicians, since they are often exquisitely sensitive to nuances indicative of public support. Even legislators whose survival in office depends on support from groups that are unfriendly to organized medicine know that they must not ignore the voice of medicine altogether.

Personal charm and ease of communication are helpful in opening doors in making initial contacts. These are of less value afterwards, for decisions are generally reached on the basis of power relationships, not on the basis of reasonableness and fairness, and not even on the basis of personal friendship. These are very helpful attributes, but only when they are combined with the backing of powerful enough interests.

The voice of medicine is generally listened to with respect, because it often has the support of widespread segments of the population. It would have even greater impact if it were supported by the active interest of physicians in their offices. The public interest as well as the interests of medicine would be served better if physicians would enlist the support of their patients for programs that are medically significant and for the public's good. It is naive to ignore the fact that the present-day physician has a direct responsibility in this complex, urban society to help create the conditions for the practice of good medicine, without compromising basic traditions of the profession by doing so. Supplicants are generally regarded with pity. The voice of medicine need not and should not sound that way.

Many physicians still live in a political fantasy-world that no longer exists. It was possible in the past for a physician to devote himself totally to the care of patients, leaving everything else to others. It is not possible to do so today, for the modern physician is a businessman, an administrator and a teacher no less than he is a healer. Many physicians understandably wish to disown such unpleasant reality. They refuse, for instance, to discuss fees with patients and relegate this task to the nurse, as if money is an unimportant and dirty aspect of their practices. This attitude often extends also to involvement in political activity. And yet, all aspects of hospital work, medical education, and even the private practice of medicine are regulated, limited, and to a large extent determined by governmental laws and edicts. Medicine is not practiced in a political vacuum, as it may have been a hundred years ago, and it is not in the best interests of physicians or their patients to deny or ignore such simple facts.

Many personally enjoyable and politically helpful contacts are made during a week's stay in Lansing, and it makes good sense, politically and personally, to maintain and cultivate such contacts.

When serum cholesterol demands attention...

atients may need...
- Diet control
- A proven cholesterol-lowering adjunct to diet*
- Convenient once-a-day dosage*
- Reasonable cost*

***Choloxin®**

(sodium dextrothyroxine)

agent for low density lipoproteins, "type II hyperlipidemia," in euthyroid, non-cardiac patients.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

See reverse side for full prescribing information

Choloxin® (sodium dextrothyroxine)

The Lipid-Lowering Agent with Once-A-Day Dosage

Four strengths . . . 1, 2, 4, and 6 mg. . . . are available making the scored tablet regimen a flexible dosage system. And, for most patients, CHOLOXIN tablets offer once-a-day dosage.

AN IMPORTANT NOTE:
It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

CHOLOXIN® (sodium dextrothyroxine) Single-Tablet-A-Day Dosage Schedules

See prescribing information in package insert reproduced below.

	Starting Dosage	Increased Monthly by	Usual Maintenance	Maximal Recommended
Adult Hypercholesterolemic	1.0-2.0 mg.	1.0-2.0 mg.	4.0-8.0 mg.	4.0-8.0 mg.
Pediatric Hypercholesterolemic	0.05 mg./kg. body weight	0.05 mg./kg.	0.1 mg./kg. body weight	4.0 mg.
Hypothyroid Cardiac	0.5-1.0 mg.	1.0 mg.	4.0 mg.	4.0 mg.

Choloxin®

(sodium dextrothyroxine)

Description
CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine. It is chemically described as 0-3,5,3′,5′-tetraiodothyronine sodium salt.

Actions
The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

Most of the available evidence indicates that CHOLOXIN stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces. Cholesterol synthesis is not inhibited and abnormal metabolic end-products do not accumulate in the blood.

Indications
This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease.

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication.

Before prescribing, note the following: Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively in patients with significant myocardial impairment. CHOLOXIN dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications
The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease, including angina pectoris; history of myocardial infarction; cardiac arrhythmia or tachycardia, either active or in patients with demonstrated propensity for arrhythmias; rheumatic heart disease; history of congestive heart failure; and decompensated or borderline compensated cardiac status.
2. Hypertensive states (other than mild, labile systolic hypertension).
3. Advanced liver or kidney disease.
4. Pregnancy.
5. Nursing mothers.
6. History of iodism.

Warnings
CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care. Special consideration of the dosage schedule of CHOLOXIN is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels. Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN. As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients, and in surgery in hypothyroid patients in whom it may be advisable to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who had required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age
Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug; it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions
It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly, they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHOLOXIN for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions
The side effects attributed to dextrothyroxine therapy are, for the most part, due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient, although its relationship to CHOLOXIN therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN; a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration
For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN is approximately 0.1 mg per kilogram. The initial daily dosage should be approximately 0.05 mg per kilogram to be increased in up to 0.05 mg per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

How Supplied
CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4, and 6 mg tablets.

FLINT LABORATORIES
Division of Travenol Laboratories, Inc.
Deerfield, Illinois 60015

Maybe the patient's self-diagnosis is right. He could have hay fever. But that bright red nasal mucosa, along with the thick discharge and excoriation around the nares, strongly suggests that the main problem is a cold. Hay fever or another form of allergic rhinitis may or may not be an underlying factor.

If a complete history and examination rule out allergic rhinitis, the long-term outlook will be a lot more favorable than his own "diagnosis" would have indicated.

But right now, whether he's got allergic rhinitis or a cold, he's suffering from the same irritating symptoms of drip, congestion and stuffiness. Try DIMETAPP EXTENTABS®. They're formulated to relieve these symptoms without much chance of causing drowsiness or overstimulation. Your patients will appreciate the 24-hour relief they can get from just one tablet every 12 hours.

Cold or

Allergy?

Whether it's a cold or an allergy, Dimetapp Extentabs® relieve stuffiness, drip and congestion.*

*INDICATIONS

Based on a review of this drug by the National Academy of Sciences — National Research Council and/or other information, FDA has classified the following indications as lacking substantial evidence of effectiveness as a fixed combination: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.

CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.

WARNINGS: *Use in children.* In infants and children particularly, antihistamines in overdosage may produce convulsions and death.

PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants such as alcohol, hypnotics, sedatives, tranquilizers, etc.

ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis, and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.

HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.

Dimetapp Extentabs®

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

A·H·ROBINS

A. H. Robins Company, Richmond, Va. 23220

when pain goes on... and on... and on–

For the patient with a terminal illness, PAIN past, present, and future can dominate his thoughts until it becomes almost an obsession. The more he is aware of the pain he is now experiencing, the more difficult it is to erase his memory of yesterday's pain, and to allay his fearful anticipation of tomorrow's pain.

Surely the last thing this patient needs is an analgesic containing caffeine to stimulate the senses and heighten pain awareness. A far more logical choice is Phenaphen with Codeine. The sensible formula provides ¼ grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can help control the pain more effectively. Don't you agree, Doctor, that psychic distress is an important factor in most of your terminal and long-term convalescent patients?

the analgesic formula that calms instead of caffeinates

Phenaphen® with Codeine

Phenaphen with Codeine No. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Codeine phosphate, ¼ gr. (No. 2), ½ gr. (No. 3) or 1 gr. (No. 4) (warning: may be habit forming). **Indications:** Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

CIII Phenaphen with Codeine is now classified in Schedule III, Controlled Substances Act of 1970. Available on written or oral prescription and may be refilled 5 times within 6 months, unless restricted by state law.

A. H. Robins Company, Richmond, Va. **A·H·ROBINS**

Commentary

Funds and Support Needed To Expand Rural Medical Care

By Donna Allen
MSMS Bureau
Of Economic Information

It is a generally-accepted fact that there is a maldistribution of physicians between urban and rural areas of the United States. The federal government has identified 677 areas that have a ratio of less than one primary care physician for every 4,000 citizens, and most of these are located in rural parts of the country. What are some of the causes for such drastic shortages, and what is being done to try to alleviate the problem?

Many experts believe that a major reason why there are not enough physicians in rural practice is because medical schools are oriented to clinical teaching in hospitals. Therefore, the students often relate to the model of a specialist, not the family doctor in primary care. But the experts admit that there is much more to it than that.

Other physicians expert in the rural medical situation list some other problems as being: 1) the 24-hour day, seven day-a-week schedule is considered by many new graduates to be too rigorous; 2) a lack of professional colleagues with whom to talk or who could care for their patients when they want time off; 3) spouses who are "unwilling to live in a small town and to raise their children with limited cultural and educational resources, especially if they grew up in an urban area and have never experienced the challenge of a different pattern of living"; 4) limited availability of continuing education opportunities.

In 1970, the federal government began working to eliminate some of the shortages through the Emergency Health Personnel Act of 1970. It was under this law that the National Health Service Corps (NHSC) was established to recruit physicians, dentists, nurses, and physician extenders to work in areas that cannot get or retain health professionals. The corps is designed to provide emergency treatment for areas with acute shortages. By encouraging assignees to stay and practice in underserved areas, it also hopes to provide a long-term cure for physician shortages.

When it was first created, NHSC had no trouble recruiting physicians because a desolate area of the U.S. was much more appealing than the rice paddies of Vietnam. But with U.S. troop withdrawal from South Vietnam and suspension of the doctor draft, the NHSC as alternative service lost a lot of its appeal.

To combat this, the Corps has instituted many new incentives to attract new personnel. Among these are competitive salaries, scholarships and monthly stipends to medical students in return for a minimum commitment of two years' service, and a "loan forgiveness" program which waives 60% of all documentable medical school loans for doctors who serve two years and 85% for physicians who serve three years.

Despite all of the incentives, though, the corps is still having its problems in getting people to join and stay. Of the 677 critical shortage areas, 193 (or one-third) have NHSC sites; in the midwest region alone, only seven out of 80 critically short areas have corps sites. But Ed Martin, MD, director of NHSC, is confident that this is one good way "to bring back in significant numbers an endangered species of physician — the country doctor."

The University of Iowa College of Medicine has a program that it feels can attract more physicians into rural areas. Its philosophy is that medical schools must develop programs that link student training and resident teaching assignments with a rural setting. In 1972 it started the Model Rural Health Center on the Oakdale campus of the University of Iowa, with the Area Family Practice Office as its nucleus which serves as the primary teaching facility for residents. The physicians associated with this project believe the family practice offices of this type will function as *primary* care units for the rural health care systems of the future while being associated with larger, *secondary* regional health centers that serve the consultative medical needs of a particular community. These regional facilities will then relate to the university *tertiary* medical centers that are staffed by highly specialized personnel and equipped to manage complicated and less frequently encountered problems.

Michigan State University has started a program this year that it hopes will attract more physicians to the Upper Peninsula. The first 10 students began their training in the U.P. this January, and the admissions committee hopes to expand the program to include 10 more in January, 1976. The students are not required to practice in the Upper Peninsula after completion of their training, but the admissions committee does try to select those candidates most likely to

(Continued on page 796)

NHI No Panacea For Nation's Health

By Mark Campbell, MD
Grand Rapids

As a first year post-graduate physician, I am no different than perhaps 14,000 other individuals at this point in my career. The question which confronts us all is: what can be done to significantly increase this thing which we call health and happiness here on earth?

In anticipation of 1976, my thoughts on this matter run to the attention and hope attached to national health insurance. All of the NHI plans are and will continue to be pushed for all they're worth in search of the elusive "good health" to which we feel we are entitled. One wonders if any of these plans does just that.

Narrowing our scope to just the morbidity/mortality question, and considering a few well known health statistics, we can see that the individual has a very large stake in this question.

Therefore, on the threshold of national insurance, we as Americans should clearly understand that though NHI may solve many problems of finance and health care delivery, we cannot expect it to dramatically decrease those diseases we as individuals heavily contribute to.

Furthermore, if one examines health care statistics of morbidity/mortality and also looks at what we know of American life-style in general, striking patterns appear which have long been noted by epidemiologists.

The single largest cause of death in this country is heart disease. Many contributing factors to this group of diseases are conspicuous in their relation to that thing we call "the American way of life."

Similarly, cigarette smoking is the most strongly established behavioral link to coronary artery disease. It is also emphatically linked to lung cancer by the Surgeon General and represents a large portion of the deaths of America's number two killer, cancer.

Surveying other causes of death which are prominent in this country, cirrhosis, the irreversible atrophy of the liver, ranks high. A large portion of these deaths can be attributed to behavioral linked problems such as alcoholism and hepatitis.

In the fight against disease, we are all our own worst enemies. More directly, what NHI cannot do for us, we must do for ourselves. NHI is not the pot of gold at the end of the health care rainbow.

KAY CIEL® ELIXIR
(potassium chloride) 10%

DESCRIPTION: Each 15 ml. (one tablespoonful) contains potassium chloride 1.5 Gms., supplying 20 mEq. of elemental potassium, and 20 mEq. of chloride, in a cherry-flavored, palatable base; alcohol 4%. Contains no sugar.

INDICATIONS: Treatment of potassium deficiency occurring especially during thiazide diuretic or corticosteroid therapy, digitalis intoxication, low dietary intake of potassium, or as a result of excessive vomiting and diarrhea. Other causes of hypokalemia are fistulae, laxative abuse, villous adenoma, familial periodic paralysis, hyperthyroid periodic paralysis, insulinoma, primary aldosteronism or secondary aldosteronism, Cushing's Disease, renal potassium wasting conditions such as potassium wasting nephritis, and alkalosis.

CONTRAINDICATIONS: Impaired renal function, untreated Addison's Disease, dehydration, heat cramps and hyperkalemia.

PRECAUTIONS: Potassium chloride should be administered with caution and adjusted to the requirements of the individual patient, since the amount of deficiency and corresponding daily dose is often not known. Excessive or even therapeutic doses may result in potassium intoxication. The patient should be checked frequently and periodic ECG and/or plasma potassium levels made. High plasma concentrations of potassium ion may cause cardiac depression, arrhythmias or arrest. Use with caution in patients with cardiac disease. In hypokalemic states, attention should be directed toward the correction of the frequently associated hypochloremic alkalosis.

ADVERSE REACTIONS: Vomiting, nausea, abdominal discomfort and diarrhea may occur. Symptoms and signs of potassium intoxication include listlessness, mental confusion, paresthesia of the extremities, weakness of the legs, flaccid paralysis, fall in blood pressure, cardiac arrhythmias, and heart block. When hyperkalemia exists, it should be promptly treated with the discontinuance of potassium administration or other steps to lower serum levels if indicated, since sudden shift in plasma levels may induce potentially dangerous cardiac arrhythmias.

DOSAGE AND ADMINISTRATION: One tablespoonful of 15 ml. (equal to 20 milli-equivalents) diluted in a 4 ounce glass of water, tomato or orange juice twice daily after meals will be sufficient to replete potassium losses in most hypokalemia patients. Some patients (approximately 30 percent), will require a dose of 15 ml. t.i.d. to reverse diuretic-induced hypokalemia patients. However, these patients require close supervision to avoid the possibility of potassium intoxication. Patients should be cautioned to follow directions implicitly in regard to dilution of Kay Ciel Elixir to prevent gastrointestinal injury.

CAUTION: Federal Law prohibits dispensing without prescription.

HOW SUPPLIED: 16 FL. OZ. (473 ml.) (ONE PINT) and 128 FL. OZ. (3785 ml.) (ONE GALLON) bottles.

Cooper
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Wayne, New Jersey 07470

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"Potassium chloride is preferred to other salts of potassium since, in most hypokalemic states, hypochloremia is also present and chloride ion is needed to allow complete potassium replacement."[1]

"In general, the chloride alt is preferable because of he participation of chloride n the renal conservation of otassium."[2]

"If potassium depletion is accompanied by a deficit of chloride, it may be quite difficult to correct that deficit and dissipate the alkalosis unless adequate quantities of chloride are made available."[3]

We have it on best authority...

KAY CIEL® Elixir

(potassium chloride) 10%

Replaces more than just potassium

1. AMA Drug Evaluations, ed. 2, Publishing Sciences Group, Inc., Acton, Mass., 1973, p. 184.
2. Sandstead, H., in Wintrobe, M.M. *et al.* (Eds.): Harrison's Principles of Internal Medicine, ed. 7, New York, McGraw-Hill Book Company, 1974, p. 441.
3. Welt, L.G., in Goodman, L.S., and Gilman, A. (Eds.): The Pharmacological Basis of Therapeutics, ed. 4, New York, The Macmillan Company, 1970, pp. 798-799.

Please see full prescribing information on opposite page.

143-38 / COS-146

Doctor's Help Needed for EPSDT Program

By Chris Fox, Lansing
***Special to* Michigan Medicine**

Physicians are invited to help the state locate children eligible for Medicaid.

Doctors can help by referring Medicaid-eligible families with children under the age of 21 to the Department of Social Services, according to Thomas R. Kirk, MD, program director, Child Health Division, Michigan Department of Public Health.

"Our program, called Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) is not designed to replace the care of a physician," Doctor Kirk explained. "It seeks instead to identify those who need a doctor and direct them to one."

The program is operated by the Michigan Department of Public Health and the Michigan Department of Social Services. Clinics affiliated with county health departments in all 83 Michigan counties act as screening agents.

Patients are referred for further diagnosis and treatment to a physician, dentist, optometrist or state or local agency that can provide the needed help.

"The problem is that the people we are trying to reach often get care only in an emergency room when they have an acute health problem," said Anne Rossi, MDPH administrative analyst. "They are simply unaware of the many health services available to them."

The EDSDT program is funded on a 50-50 basis between the federal and state governments. "I know of only one other state that has a program in every county," said Doctor Kirk. The U.S. Department of Health, Education and Welfare has shown a great interest in Michigan's program.

Since its inception in 1973, over 271,000 young people have been screened in the clinics. Of these, more than half, 140,316, have been referred for more extensive health care. "The EPSDT program tries to find the people who appear to have a health problem and put them in touch with the right people," said William Keller, program coordinator for the outreach effort for the Department of Social Services. It's estimated that 440,000 people are eligible for the program in Michigan.

Most referrals, about 30 percent, are made for dental problems, according to Doctor Kirk. Another 14 percent are referred for health problems detected from the health history. Some 13 percent are referred for vision test failures.

"We have very high priorities for referrals," said Avis Dykstra, MDPH nursing consultant for the program. "We could refer almost every child. We only send children who have obvious problems."

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Pain: a call to action.

- ☐ rapid acting
- ☐ effective, reliable oral analgesia in moderate to moderately severe pain
- ☐ oxycodone, the principal ingredient of Percodan, is one of the more readily absorbed oral narcotic analgesics
- ☐ one tablet q.6 h.*

Percodan® Tablets

Each yellow, scored tablet contains 4.50 mg oxycodone HCl (Warning: May be habit forming), 0.38 mg. oxycodone terephthalate (Warning: May be habit forming), 224 mg aspirin, 160 mg phenacetin, and 32 mg caffeine CII

See Brief Summary

*See dosage and administration section of Brief Summary

Whenever an APC/narcotic is indicated.

Each yellow, scored tablet contains 4.50 mg oxycodone HCl (Warning. May be habit forming), 0.38 mg oxycodone terephthalate (Warning May be habit forming), 224 mg. aspirin, 160 mg phenacetin, and 32 mg. caffeine

INDICATIONS: For the relief of moderate to moderately severe pain

CONTRAINDICATIONS: Hypersensitivity to oxycodone, aspirin, phenacetin or caffeine.

WARNINGS: *Drug Dependence:* Oxycodone can produce drug dependence of the morphine type and, therefore, has the potential for being abused Psychic dependence, physical dependence and tolerance may develop upon repeated administration of PERCODAN, and it should be prescribed and administered with the same degree of caution appropriate to the use of other oral narcotic-containing medications. Like other narcotic-containing medications, PERCODAN is subject to the Federal Controlled Substances Act

Usage in ambulatory patients Oxycodone may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery The patient using PERCODAN should be cautioned accordingly

Interaction with other central nervous system depressants. Patients receiving other narcotic analgesics, general anesthetics, phenothiazines, other tranquilizers, sedative-hypnotics or other CNS depressants (including alcohol) concomitantly with PERCODAN may exhibit an additive CNS depression. When such combined therapy is contemplated, the dose of one or both agents should be reduced

Usage in pregnancy: Safe use in pregnancy has not been established relative to possible adverse effects on fetal development. Therefore, PERCODAN should not be used in pregnant women unless, in the judgment of the physician, the potential benefits outweigh the possible hazards

Usage in children. PERCODAN should not be administered to childre

Salicylates should be used with caution in the presence of peptic ulcer or coagulation abnormalities.

PRECAUTIONS: *Head injury and increased intracranial pressure* The respiratory depressant effects of narcotics and their capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions or a pre-existing increase in intracranial pressure Furthermore, narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries

Acute abdominal conditions. The administration of PERCODAN or other narcotics may obscure the diagnosis or clinical course in patients with acute abdominal conditions

Special risk patients: PERCODAN should be given with caution to certain patients such as the elderly or debilitated, and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, and prostatic hypertrophy or urethral stricture

Phenacetin has been reported to damage the kidneys when taken in excessive amounts for a long time

ADVERSE REACTIONS. The most frequently observed adverse reactions include light-headedness, dizziness, sedation, nausea and vomiting Some of these adverse reactions may be alleviated if the patient lies down

Other adverse reactions include euphoria, dysphoria, constipation and pruritus

DOSAGE AND ADMINISTRATION: Dosage should be adjusted according to the severity of the pain and the response of the patient It may occasionally be necessary to exceed the usual dosage recommended below in cases of more severe pain or in those patients who have become tolerant to the analgesic effect of narcotics The usual adult dose is one tablet every six hours as needed for pain.

DRUG INTERACTIONS. The CNS depressant effects of PERCODAN may be additive with that of other CNS depressants. See WARNINGS

Aspirin may enhance the effect of anticoagulants and inhibit the effect of uricosuric agents

MANAGEMENT OF OVERDOSAGE *Signs and Symptoms:* Serious overdose with PERCODAN is characterized by respiratory depression, extreme somnolence progressing to stupor or coma, skeletal muscle flaccidity, cold and clammy skin, and sometimes bradycardia and hypotension In severe overdosage, apnea, circulatory collapse, cardiac arrest and death may occur The ingestion of very large amounts of PERCODAN may, in addition, result in acute salicylate intoxication

Treatment Primary attention should be given to the reestablishment of adequate respiratory exchange through provision of a patent airway and the institution of assisted or controlled ventilation. The narcotic antagonists naloxone, nalorphine or levallorphan are specific antidotes against respiratory depression which may result from overdosage or unusual sensitivity to narcotics, including oxycodone Therefore, an appropriate dose of one of these antagonists should be administered, preferably by the intravenous route, simultaneously with efforts at respiratory resuscitation Since the duration of action of oxycodone may exceed that of the antagonist, the patient should be kept under continued surveillance and repeated doses of the antagonist should be administered as needed to maintain adequate respiration

An antagonist should not be administered in the absence of clinically significant respiratory or cardiovascular depression

Oxygen, intravenous fluids, vasopressors and other supportive measures should be employed as indicated

Gastric emptying may be useful in removing unabsorbed drug

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Jackson Prison Needs Doctors

For the physician who likes challenges, here's one — sharing in the medical care of the 5,000 residents of the world's largest walled prison — the State Prison of Southern Michigan at Jackson.

Officials of the state Department of Corrections are searching for four physicians to work in the prison's infirmary under the direction of a medical director, and the new head of the Office of Health Care.

Two of the four positions pay $35,683 a year and involve limited administrative duties as well as medical care; the other two posts, which are strictly medical in nature, pay $33,512 annually.

In addition, the physicians, as classified state Civil Service employees, receive benefits worth about 26 per cent of the base salary. These include paid sick leave and vacations, fully state-paid retirement, life and health insurance and long-term disability insurance on a shared premium basis.

In addition, all physicians will be on call periodically; compensation for such duty could amount to as much as $4,400 above the base salary.

Qualifications for the positions involving some administrative duties are a license to practice medicine (including osteopathic) in Michigan with seven years experience; those seeking the other posts must possess the medical license and have five years of experience.

Currently, about 80 patients are in the 142-bed infirmary; additionally, about 250 prison residents are seen every day on an outpatient basis. Staffing is provided by a registered nurse, two licensed practical nurses, 19 nurse supervisors (civilian paraprofessionals) and 31 inmate nurses. Also, residents from the University of Michigan Medical Center assist. Two pharmacists also are employed.

The department plans during the current 1975-76 fiscal year to hire more registered nurses.

Although infirmary facilities are considered generally inadequate by most medical standards, funds have been appropriated to purchase more equipment, to remodel the facility and to add staff. Long-range plans are to build a new medical facility at the prison.

In addition to caring for residents of the Jackson prison, the medical team provides physical examinations for all felons committed to the department.

For further information on these positions, contact Jack Boyett, director of personnel, Michigan Department of Corrections, Stevens T. Mason Building, Lansing, Mich. 48913.

The Journal 50 Years Ago

The MSMS Journals in 1925 — 50 years ago — carried the following scientific articles and many more:

"Value of X-Ray Diagnosis in Gastro-Intestinal Lesions" by Vernon M. Moore, MD, Grand Rapids.

"The Therapeutic Anatomy of Lobar Pneumonia" by C. F. McClintic, MD, Detroit.

"An Operation for Concealed Prolapse of the Rectum and Sigmoid," by Louis J. Hirschman, MD, Detroit.

"Endemic Goiter, A Precancerous Lesion," by Frederick A. Coller, MD, and Howard B. Barker, MD, both of Ann Arbor.

"Physiology and Pathology of the Blood in Relation to Surgery" by Wm. J. Mayo, MD, Rochester, Minnesota.

"Hypertension" by John L. Chester, MD, Detroit.

"Oxygen Therapy and Medication in the Treatment of Pneumonia in Infancy and Childhood" by Russell S. Rowland, MD, Detroit.

"Sterilization in the Feeble-Minded" by H. E. Randall, MD, Flint.

RURAL CARE/*Continued*

stay after graduation.

Robert Rakel, MD, head, Department of Family Practice, University of Iowa College of Medicine, has stated, "The extension of family practice residency programs into rural communities and the involvement of those units of two to four practicing physicians in the educational process will increase the likelihood that residents will return to these remote areas to practice." It is programs such as the three mentioned above that must be funded and supported if rural medicine is to expand.

Sources:

"A Better Break for the Rural Physician," *Prism*, November, 1973.

"Countryside needs health services: what kind and where?" *Modern Medicine*, April 1, 1974.

"Curing What Ails Rural America," *The New Physician*, April 1975.

A special commendation is presented by MSMS President Brock E. Brush, MD, third from left, to Thedore Cline, MD, chief of the medical staff at the Munson Medical Center, Traverse City. The MSMS award cited the Munson Medical staff for 55 years of outstanding Coller-Penberthy-Thirlby Medical Conferences. Left to right are U-M Medical School Dean John A. Gronvall, MD; Doctor Cline; Doctor Brush; A. James French, MD, long-time advisor for the conferences from U-M, and Laurence P. Skendzel, MD, Traverse City, 1975 conference chairman.

Here are More Good Reasons To Support MPMLC

More Michigan Physicians tell why they have decided to purchase MPMLC surplus certificates:

John E. Finger, MD, Saginaw: "I think the concept's good, particularly the company's ability to decide who is — and is not — to be insured, and who is to staff the company."

Joseph R. Lentini, MD, Grand Rapids: *"I feel in the future we will have more carriers pull out and we ought to have a vehicle whereby doctors can get coverage."*

Jackson E. Livesay, MD, Flint: *"Our PC of seven members (all have decided to purchase certificates 'to get this thing rolling') think it is the best thing to come along yet for the future of professional liability insurance."*

J.W. MacKenzie, Jr., MD, Swartz Creek: *"The four of us in our PC are in family practice and yet we have to pay outrageous premiums. The MPMLC won't solve the premium problem, but it will solve the problem of availability. We agree with the tenets this company is based upon."*

Fredrick O. Melges, MD, Battle Creek: *"I bought three certificates, because (1) my insurance program is running out in October and I'm looking for a new insurance source; (2) I appreciate the intelligence of the MPMLC brochure – it's well written and understandable," and (3) I knew some doctors might be unable to pay their share."*

Charles C. Vincent, MD, Detroit: *"I feel the current insurance programs and rates are totally unfair and are handled with no consideration for the physician or his professional standing. Hopefully, if the insurance program is established by MSMS, it will be oriented toward giving remuneration when indicated and certainly taking to court any suits without any basis whatever."*

Good Thoughts

(The following is excerpted, with the author's permission, from the May issue of the Wisconsin Medical Journal, *May 1975. The author is Howard L. Correll, MD, Milwaukee, president, State Medical Society of Wisconsin.)*

"Protection of economic and personal interests, in my opinion, should never be our primary objective. . . . The concern and search for the public good is the way we in medicine, as well as everyone else, must approach the life-destructive forces developed by our scientific-technological-industrial society. No one can put self-interest foremost. The setting of person-against-person, group-against-group, and nation-against-nation cannot long be compatible with life. Here, I think, may be the heart of our problems as well as those of the world. Here should be our greatest study and research area. On how well we learn to relate to others — person-to-person, group-to-group, and nation-to-nation — will, to a great degree, rest the fate of medicine and of man."

MSMS Division steering committees have been working steadily and diligently throughout the past year to reorganize the MSMS committee structure and designate the most important tasks of those committees. Among them are the Division Steering Committee on Public Service and Community Relations, shown above during a meeting at MSMS headquarters. Steering committee chairman is Thomas C. Payne, MD, Lansing.

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FOR LONG-TERM CONTROL OF HYPERTENSION*

Serum K+ and BUN should be checked periodically. (See Warnings Section.)

SPARES POTASSIUM

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

> * Warning
> This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

*Indications: *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration.** Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

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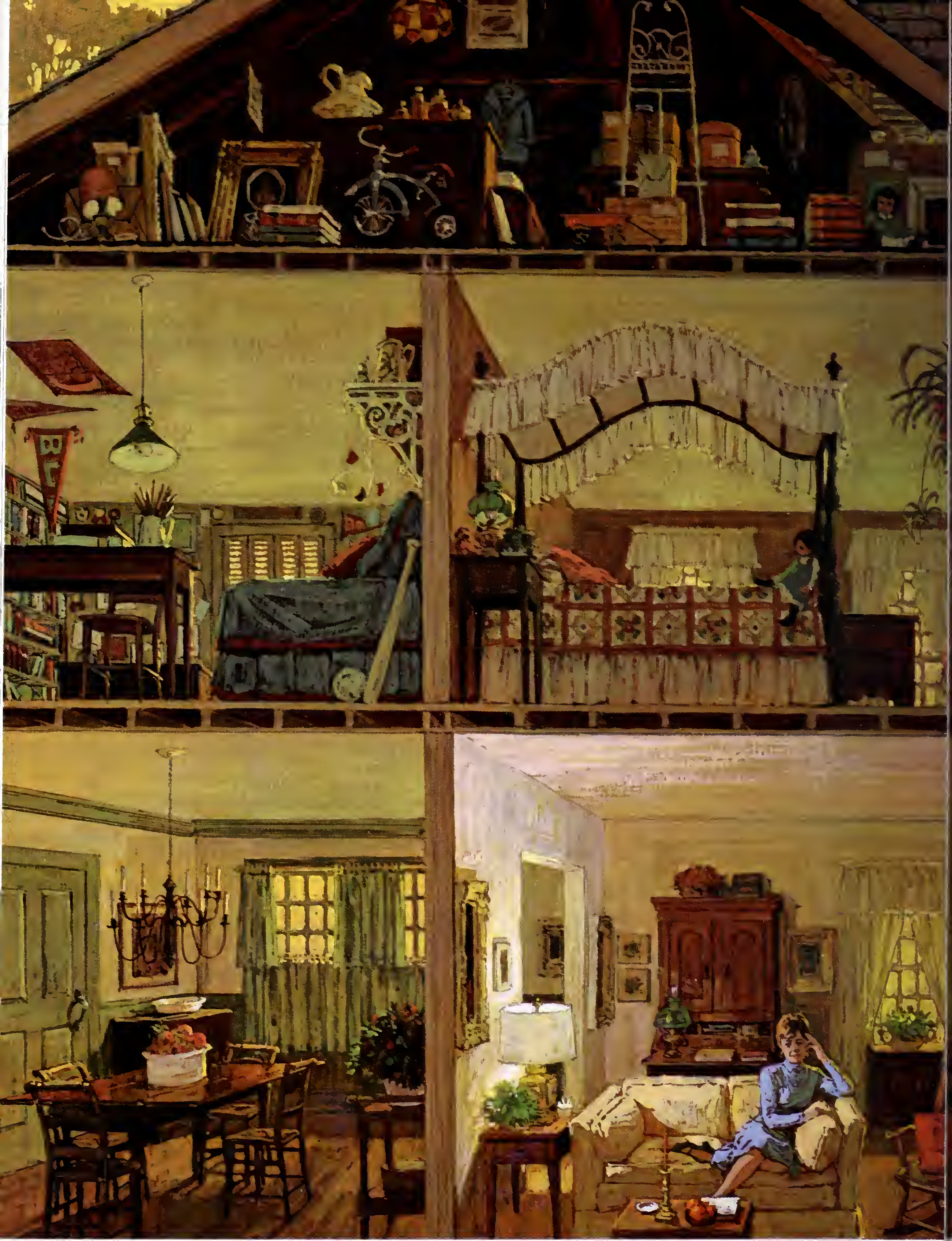

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for depression with moderate anxiety

in many cases a result of the "empty nest syndrome"

The mid-life crisis: a critical crossroad

Preparation for change—intellectually, vocationally (or avocationally), and emotionally—can often help the menopausal-aged woman cope successfully with a new and different role after the children are grown and gone. Even when these changes have been anticipated and prepared for, a mid-life depression with moderate anxiety is not uncommon—a syndrome often uncontrolled by counseling or other appropriate measures and for which specific medication may be required.

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TRIAVIL provides a highly effective antidepressant and tranquilizer for symptomatic relief of *both* depression and coexisting moderate anxiety. The patient may be able to function more effectively in her daily life.

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Contraindicated in CNS depression from drugs; in the presence of evidence of bone marrow depression; and in patients hypersensitive to phenothiazines or amitriptyline. Should not be used during the acute recovery phase following myocardial infarction or in patients who have received an MAOI within two weeks. Patients with cardiovascular disorders should be watched closely. Not recommended in children or during pregnancy. The drug may impair mental or physical abilities required in the performance of hazardous tasks and may enhance the response to alcohol. Antiemetic effect may obscure toxicity due to other drugs or mask other disorders. Since suicide is a possibility in any depressive illness, patients should not have access to large quantities of the drug. Hospitalize as soon as possible any patient suspected of having taken an overdose.

For additional prescribing information, please turn to the following page.

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CONTRAINDICATIONS: Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); bone marrow depression; known hypersensitivity to phenothiazines or amitriptyline. Do not give concomitantly with MAOI drugs because hyperpyretic crises, severe convulsions, and deaths have occurred from such combinations. Allow minimum of 14 days between therapies, then initiate therapy with TRIAVIL cautiously, with gradual increase in dosage until optimum response is achieved. Not recommended for use during acute recovery phase following myocardial infarction.

WARNINGS: TRIAVIL should not be given with guanethidine or similarly acting compounds. Use cautiously in patients with history of urinary retention, angle-closure glaucoma, increased intraocular pressure, or convulsive disorders. In patients with angle-closure glaucoma, even average doses may precipitate an attack. Patients with cardiovascular disorders should be watched closely. Tricyclic antidepressants, including amitriptyline HCl, particularly in high doses, have been reported to produce arrhythmias, sinus tachycardia, and prolongation of conduction time. Myocardial infarction and stroke have been reported with tricyclic antidepressant drugs. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. Caution patients performing hazardous tasks, such as operating machinery or driving motor vehicles, that drug may impair mental and/or physical abilities. Not recommended in children or during pregnancy.

PRECAUTIONS: Suicide is a possibility in depressed patients and may remain until significant remission occurs. Such patients should not have access to large quantities of this drug.

Perphenazine: Should not be used indiscriminately. Use with caution in patients who have previously exhibited severe adverse reactions to other phenothiazines. Likelihood of untoward actions is greater with high doses. Closely supervise with any dosage. The antiemetic effect of perphenazine may obscure signs of toxicity due to overdosage of other drugs or make more difficult the diagnosis of disorders such as brain tumor or intestinal obstruction. A significant, not otherwise explained, rise in body temperature may suggest individual intolerance to perphenazine, in which case discontinue.

If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Phenothiazines may potentiate the action of central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol) and atropine. In concurrent therapy with any of these, TRIAVIL should be given in reduced dosage. May also potentiate the action of heat and phosphorous insecticides.

Amitriptyline: In manic-depressive psychosis, depressed patients may experience a shift toward the manic phase if they are treated with an antidepressant. Patients with paranoid symptomatology may have an exaggeration of such symptoms. The tranquilizing effect of TRIAVIL seems to reduce the likelihood of this effect. When amitriptyline HCl is given with anticholinergic agents or sympathomimetic drugs, including epinephrine combined with local anesthetics, close supervision and careful adjustment of dosages are required.

Caution is advised if patients receive large doses of ethchlorvynol concurrently. Transient delirium has been reported in patients who were treated with 1 g of ethchlorvynol and 75-150 mg of amitriptyline HCl.

Amitriptyline HCl may enhance the response to alcohol and the effects of barbiturates and other CNS depressants.

Concurrent administration of amitriptyline HCl and electroshock therapy may increase the hazards associated with such therapy. Such treatment should be limited to patients for whom it is essential Discontinue several days before elective surgery if possible. Elevation and lowering of blood sugar levels have both been reported.

ADVERSE REACTIONS: Similar to those reported with either constituent alone.

Perphenazine: Side effects may be any of those reported with phenothiazine drugs: extrapyramidal symptoms (opisthotonus, oculogyric crisis, hyperreflexia, dystonia, akathisia, acute dyskinesia ataxia, parkinsonism) can usually be controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine.

Tardive dyskinesia may appear in some patients on long-term therapy or may occur after drug therapy with phenothiazines and related agents has been discontinued. The risk appears to be greater in elderly patients on high-dose therapy, especially females. Symptoms are persistent and in some patients appear to be irreversible. The syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth, or jaw (e.g., protrusion of tongue, puffing of cheeks, puckering of mouth, chewing movements). Involuntary movements of the extremities sometimes occur. There is no known treatment for tardive dyskinesia; antiparkinsonism agents usually do not alleviate the symptoms. It is advised that all antipsychotic agents be discontinued if the above symptoms appear. If treatment is reinstituted, or dosage of the particular drug increased, or another drug substituted, the syndrome may be masked. It has been suggested that fine vermicular movements of the tongue may be an early sign of the syndrome, and that the full-blown syndrome may not develop if medication is stopped when lingual vermiculation appears.

Other side effects are skin disorders (photosensitivity, itching erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema anaphylactoid reactions); peripheral edema; reversed epinephrine effect; hyperglycemia; endocrine disturbances (lactation, galactorrhea, gynecomastia, disturbances of menstrual cycle); altered cerebrospinal fluid proteins; paradoxical excitement; hypertension hypotension, tachycardia, and ECG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions, such as dry mouth or salivation, headache anorexia, nausea, vomiting, constipation, obstipation, urinary frequency or incontinence, blurred vision, nasal congestion, and a change in pulse rate; hypnotic effects; pigmentary retinopathy; corneal and lenticular pigmentation; occasional lassitude, muscle weakness, mild insomnia. Other adverse reactions reported with various phenothiazine compounds include blood dyscrasias (pancytopenia thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); liver damage (jaundice, biliary stasis); grand mal convulsions; cerebral edema; polyphagia; photophobia; skin pigmentation; and failure of ejaculation.

Amitriptyline: Note: Listing includes a few reactions not reported for this drug, but which have occurred with other pharmacologically similar tricyclic antidepressant drugs. *Cardiovascular:* Hypotension; hypertension; tachycardia; palpitation; myocardial infarction; arrhythmias; heart block; stroke. *CNS and Neuromuscular:* Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms; tinnitus; syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Anticholinergic:* Dry mouth; blurred vision; disturbance of accommodation; constipation; paralytic ileus; urinary retention; dilatation of urinary tract. *Allergic:* Skin rash; urticaria; photosensitization; edema of face and tongue *Hematologic:* Bone marrow depression including agranulocytosis; leukopenia; eosinophilia; purpura; thrombocytopenia. *Gastrointestinal:* Nausea; epigastric distress; vomiting; anorexia; stomatitis; peculiar taste; diarrhea; parotid swelling; black tongue. *Endocrine:* Testicular swelling and gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido; elevated or lowered blood sugar levels. *Other:* Dizziness; weakness; fatigue; headache; weight gain or loss; increased perspiration; urinary frequency; mydriasis; drowsiness; jaundice; alopecia. *Withdrawal Symptoms:* Abrupt cessation after prolonged administration may produce nausea, headache, and malaise. These are not indicative of addiction.

OVERDOSAGE: All patients suspected of having taken an overdosage should be admitted to a hospital as soon as possible. Treatment is symptomatic and supportive. However, the intravenous administration of 1—3 mg of physostigmine salicylate is reported to reverse the symptoms of tricyclic antidepressant poisoning. Because physostigmine is rapidly metabolized, the dosage of physostigmine should be repeated as required particularly if life-threatening signs such as arrhythmias, convulsions, and deep coma recur or persist after the initial dosage of physostigmine. On this basis, in severe overdosage with perphenazine-amitriptyline combinations, symptomatic treatment of central anticholinergic effects with physostigmine salicylate should be considered.

For more detailed information, consult your MSD Representative or see full Prescribing Information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486.

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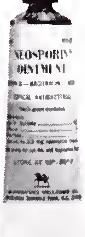

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Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing. **CONTRAINDICATIONS:** Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components. **WARNING:** Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended. **PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

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Detroit Physicians Now Have Their Own Radio Network

More than 600 Detroit-area physicians are now tied in to the new, closed circuit radio broadcast of the Physicians Radio Network (PRN). By turning on their special radios these doctors can avail themselves of the latest news of medicine on both the national and local scene.

Because the subject matter of the programs is often highly technical and is of interest primarily to physicians, PRN broadcasts on a special local radio channel subleased from station WMUZ — FM, Detroit. In order to listen to the programs, physicians need a special receiver, supplied by PRN, which is tuned to the special frequency. The program is paid for by the sale of commercial time.

"We see PRN as a way to bridge the doctor's time-information gap," says Jay Raeben, managing director of the new service, based in New York City. "PRN represents the first successful effort to provide special medical information to the physician on a daily basis. PRN can also help the medical community mobilize resources immediately to deal with health matters requiring swift reaction such as major disasters, drug alerts, outbreaks of disease, and other medical emergencies," he added.

The daily PRN program is 60 minutes long, and is repeated 24 times a day, to compensate for the busy and often unpredictable nature of the physician's day. National and local feature stories from special PRN correspondents throughout the world are repeated hourly throughout the day; news bulletins are updated continously and broadcast at once.

The one-hour program also provides for a one minute spot of local news. The tapes for this are prepared by MSMS staff in cooperation with the Wayne County Medical Society and feature announcements of local medical meetings, current news of events on the state level, and items of general interest to doctors.

"No one expects a doctor to sit down for a full hour and listen to the radio," says Raeben, "but the hourly repeat makes it possible to catch something that was missed earlier."

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DESCRIPTION: Methyltestosterone is 17β-Hydroxy-17-Methylandrost-4-en-3-one. **ACTIONS:** Methyltestosterone is an oil soluble androgenic hormone. **INDICATIONS:** In the male: 1. Eunuchoidism and eunichism. 2. Male climacteric symptoms when these are secondary to androgen deficiency. 3. Impotence due to androgenic deficiency. 4. Postpuberal cryptorchidism with evidence of hypogonadism. Cholestatic hepatitis with jaundice and altered liver function tests, such as increased BSP retention, and rises in SGOT levels, have been reported after Methyltestosterone. These changes appear to be related to dosage of the drug. Therefore, in the presence of any changes in liver function tests, drug should be discontinued. **PRECAUTIONS:** Prolonged dosage of androgen may result in sodium and fluid retention. This may present a problem, especially in patients with compromised cardiac reserve or renal disease. In treating males for symptoms of climacteric, avoid stimulation to the point of increasing the nervous, mental, and physical activities beyond the patient's cardiovascular capacity. **CONTRAINDICATIONS:** Contraindicated in persons with known or suspected carcinoma of the prostate and in carcinoma of the male breast. Contraindicated in the presence of severe liver damage. **WARNINGS:** If priapism or other signs of excessive sexual stimulation develop, discontinue therapy. In the male, prolonged administration or excessive dosage may cause inhibition of testicular function, with resultant oligospermia and decrease in ejaculatory volume. Use cautiously in young boys to avoid premature epiphyseal closure or precocious sexual development. Hypersensitivity and gynecomastia may occur rarely. PBI may be decreased in patients taking androgens. Hypercalcemia may occur, particularly during therapy for metastatic breast carcinoma. If this occurs, the drug should be discontinued. **ADVERSE REACTIONS:** Cholestatic jaundice • Oligospermia and decreased ejaculatory volume • Hypercalcemia particularly in patients with metastatic breast carcinoma. This usually indicates progression of bone metastases • Sodium and water retention • Priapism • Virilization in female patients • Hypersensitivity and gynecomastia. **DOSAGE AND ADMINISTRATION:** Dosage must be strictly individualized, as patients vary widely in requirements. Daily requirements are best administered in divided doses. The following is suggested as an average daily dosage guide. **In the male:** Eunuchoidism and eunuchism, 10 to 40 mg.; Male climacteric symptoms and impotence due to androgen deficiency, 10 to 40 mg.; Postpuberal cryptorchism, 30 mg. **HOW SUPPLIED:** 5, 10, 25 mg. in bottles of 60, 250.

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In Memoriam

Robert J. Baruch, MD
Birmingham

Robert Jack Baruch, MD, Birmingham, died Oct. 2 at the age of 42. Doctor Baruch was a graduate of Wayne State University School of Medicine, a member of the American College of Radiology and the Radiological Society of North America. He was affiliated with Lynn Hospital of Lincoln Park and Redford Community Hospital, and was a director of the Wayne State Fund.

Roal L. Bobbio, MD
Troy

Anesthesiologist Roal Ludovico Bobbio, MD, Troy, died Aug. 3 at the age of 46. Doctor Bobbio was a graduate of the medical school of the Universidad Nacional de Cordoba, Argentina, and was affiliated with Crittenton Hospital, Detroit. He was a member of the American and Michigan anesthesia societies and the National Fire Protection Association.

Roger W. DeBusk, MD
Grosse Pointe Farms

The retired director of Grace Hospital, Detroit, Roger W. DeBusk, MD, Grosse Pointe Farms, died Oct. 16 at the age of 67. Doctor DeBusk was director of the hospital from 1954 until retirement in 1970. He was a graduate of the University of Oregon medical school and was a member of numerous medical organizations.

Laslo Galdonyi, MD
Detroit

Detroit physician for 50 years, Laslo Galdonyi, MD, died Oct. 31 at the age of 83. Doctor Galdonyi, an otolaryngologist, was on the staff of the Detroit Speech and Hearing Clinic and was affiliated with Hutzel and Sinai hospitals. He was graduated from the medical school of Petrus Pazmany University of Hungary. He served with the Austrian army during World War I and then, as a prisoner, in a Siberian prison hospital maintained by the Russians.

J. H. Ganschow, MD
Southfield

John Henry Ganschow, MD, Southfield, former

(Continued on page 810)

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Vitamin B-12	1.5 mcg
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Inositol	10 mg
Calcium Pantothenate	2.5 mg
Pyridoxine	0.25 mg
Copper (from Copper Sulfate)	0.25 mg
Zinc (from Zinc Oxide)	0.25 mg
Iodine (from Potassium Iodide	0.075 mg
Calcium (from Dicalcium Phosphate	72.5 mg
Phosphorus (from Dicalcium Phosphate)	55 mg
Potassium (from Potassium Sulfate)	2.5 mg
Manganese (from Manganese Sulfate)	0.5 mg
Magnesium (from Magnesium Sulfate)	0.5 mg

ACTION AND USES — DOSAGE: 1 tablet after breakfast and supper, or as required. In females, 3-week courses of therapy are recommended followed by a 1-week rest period. Withdrawal bleeding may occur during the rest period. **PRECAUTIONS:** Administer cautiously to female patients who tend to develop excessive hair growth or other signs of masculinization. **CONTRAINDICATIONS:** Patients in whom estrogen or androgen therapy should not be used, as in carcinoma of the breast, genital tract, or prostate, and in patients with a familial tendency to these types of malignancy. **AVAILABLE:** Bottles of 100 and 500 tablets. Rx only.

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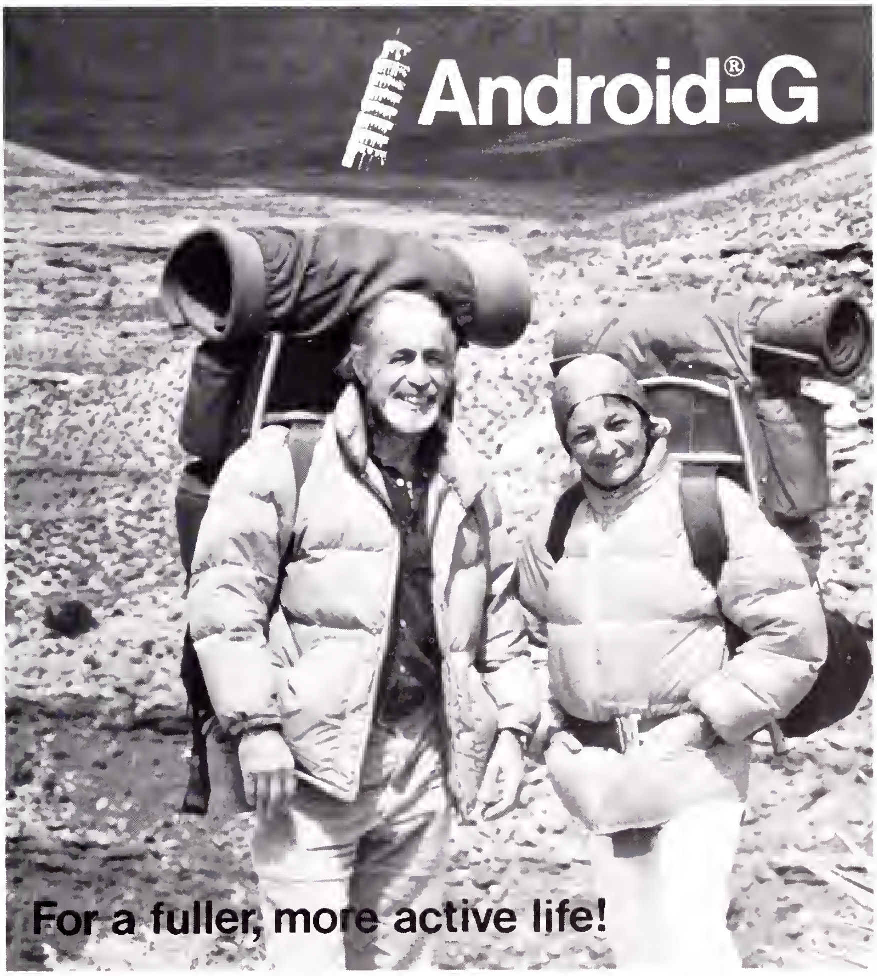

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FOR INFORMATION regarding the wide range of opportunities for Physicians (all specialties) within the Army Medical Department — Contact CPT McGrath, or CPT Engle, 530 Buckingham St., Columbus, Ohio 42315 or call collect (614) 221-5861, Ext. 264/267. Salary range $32,000 and up plus fringe benefits.

PHYSICIAN. House physician for medium size hospital in Detroit area responsible for Emergency, Inpatient and First Aid Room care. Physicals, Employee Health Clinic and Pre-Employment physicals. Excellent employee benefits. Opportunity to have small practice with office space furnished. Forward Curriculum Vitae to Box #6, 120 West Saginaw Street, East Lansing, Michigan 48823.

GP FP needed to associate with three GP MD's covering area of 150,000 people, three open hospitals with ICU, CCU and emergency room coverage. Liberal salary with incentive bonus. Pension and profit sharing plan. Rotate nights and weekends. Response to J. R. Young, M.D., 719 Capital Avenue, S.W., Battle Creek, Michigan 49015.

PRIME SPACE AVAILABLE in Southfield Medical Building containing over 60 professional people. Two separate spaces on the same floor (1,152 sq. ft. and 1,456 sq. ft.). Parking structure adjacent to building. Call Mr. Curtis, at (313) 557-5660 between 1 and 5 p.m.

FAMILY MEDICINE is alive and well and thriving in Kaukauna, Wisconsin. Additional family physicians are being sought. Good opportunity for partnership, with modern clinic building or other arrangements can be made. Ideal northeastern Wisconsin location with excellent cultural and recreation facilities. Offers good opportunity for unlimited General Practice with back up of specialties if necessary. Inquiries and visits welcome. Contact Administrator, Kaukauna Community Hospital, Kaukauna, Wisconsin 54130 or phone (414) 766-4211.

PHYSICIANS — Well staffed (70% Board Certified) 695 bed general hospital with active inpatient and outpatient services is in need of an internist, general surgeon, psychiatrist, and family practitioner, all with board certification. Full malpractice coverage provided. Excellent library and educational programs. Joint house staff and CME programs with Scott and White Clinic. Recent affiliation with new medical school. Progressive city of 35,000 with excellent schools, recreation, and cultural activities with ready access by rail, air, or interstate highway to Dallas, Houston, San Antonio, Austin, etc. Moderate climate with smog free environment. Salary competitive with liberal vacation, sick leave and fringe benefits. Equal Employment opportunity agency. Apply, Chief of Staff, VA Center, Temple, Texas 76501.

MEDICAL OFFICE EQUIPMENT FOR SALE: Hamilton examining and treatment tables with stools and waste baskets, Liebel Flarsheim diathermy, ultra sound, ultra violet light, Y & E desks, executive type swivel chairs, straight back chairs, plexiglas floor chair pads, various office surgical instruments, floor standing spot light and examining equipment; also IBM electric typewriters, 3M copying machine, office safe, filing cabinets for patients' records, etc. Contact: H.B. McCullough, M.D., 111 South Monroe St., Sturgis, Michigan 49091. Phone (616) 651-3218.

MEDICAL GROUP looking for Internists, sub-specialty preferred, to practice at Nine Mile and Greenfield Road, in Southfield, Michigan. Our current group consists of seven Internists, (six of whom have sub-specialties). Compensation is based on performance. Your earnings are not limited. Please submit a curriculum vitae to Box 15, 120 W. Saginaw St., East Lansing, Michigan 48823.

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M.C., M.P.H. with major in Maternal & Child Health, Clinical background in Pediatrics, interested in suitable position in Genesee, Lapeer, Oakland or Shiawassee counties. Available January 1976. Please Call: (303) 694-0220.

NEW PROFESSIONAL BUILDING — 5001 West St. Joe, Delta Township, Lansing. Quality space available December 1975. Excellent location. 70% owner occupied. Still time to design your own suite. Call Collect (517) 482-5539.

INTERNIST: to join young internist in upper peninsula university town. One year old 5 man multispecialty clinic one block from 100 bed hospital, near excellent recreation facilities Lake Superior. Sigurds Janners, M.D., Copper Country Medical Center, Hancock, Michigan 49930 (906) 482-4783.

RADIOLOGICAL GROUP for 350 bed general hospital in Detroit area. Reply in confidence to Box 73, Detroit, Michigan 48212.

URGENT — Need one or two family practice physicians for Berne, Indiana to take over clientele and a modern office on January 1, 1976. Solid employment in a community with excellent schools offering cultural and athletic activities. A modern "1973" hospital 12 minutes away. Write Berne Chamber of Commerce, Box 85, Berne, IN 46711 or phone (219) 589-3315.

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FAMILY PHYSICIAN — Full time position in Model Family Practice Center. Prefer board certified with family practice experience or recent family practice residency graduate. Position provides ideal combination of teaching, practice and continuing education by being involved in a quality community based educational environment. Michigan living at its best for family and personal inerests. Contact: John P. Newton, M.D., Medical Director Family Health Center, Saint Mary's Hospital, Grand Rapids, Mi 49502. Telephone (616) 774-6280.

PHARMACIST would like to open professional pharmacy in medical clinic in Detroit or suburban area. Please contact: Mr. L.H. Chadwick. 851-6381.

INTERNIST Board eligible or certified, with or without subspecialty interest, to join two busy Internists as an associate. Active medical community with drawing area of 100,000. New 130 bed JCAH hospital. Please mail C.V. to Philip H. Soucheray, M.D., 2101 Beaser Ave., Ashland, Wisconsin 54806 or call collect after 7:00 p.m. John Kluge, M.D., (715) 682-4413.

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medical director of the Chevrolet-Detroit Medical Department, died Sept. 30 at the age of 61. Doctor Ganschow was a graduate of the State University of Iowa medical school and was a fellow of the Industrial Medical Association and the American College of Preventive Medicine; a member of the American Academy of Occupational Medicine and past president of the Detroit Industrial Physicians' Club. He had been active in Wayne County Medical Society committee work.

Carl C. Gruhzit, MD
Cheboygan

Former faculty member with the University of Hong Kong Medical School from 1957 to 1970, Carl C. Gruhzit, MD, Cheboygan, died Oct. 1 at the age of 50. Doctor Gruhzit had opened practice in Cheboygan in 1972. He was a graduate of the University of Michigan Medical School and had taught on the staff of the Graduate School of Medicine at the University of Pennsylvania.

Henry A. Hoffman, MD
Detroit

Detroit generalist Henry Andrew Hoffman, MD, died Sept. 16 at the age of 71. Doctor Hoffman was a graduate of Detroit College of Medicine and Surgery, and was affiliated with St. Joseph Mercy Hospital, Detroit.

I. William McLean, MD
Detroit

I. William McLean, Jr., MD, Detroit, director of biological research and development with Parke, Davis and Co., died Oct. 11 at the age of 57. Doctor McLean had been associated with Parke, Davis for 29 years following graduation from Duke University School of Medicine. He was a member of the American Academy of Microbiology, American Association of Immunologists, American Society of Microbiologists, New York Academy of Sciences, Detroit Physiological Society and other scientific organizations.

Richard T. Mellis, MD
Kalamazoo

Richard T. Mellis, MD, Kalamazoo obstetrician-gynecologist, died Oct. 17 at the age of 49. Doctor Mellis was a graduate of Washington University medical school and was affiliated with Bronson Methodist and Borgess hospitals in Kalamazoo. Doctor Mellis was chairman of the MSMS Subcommittee on Better Utilization of OB Beds and a member of the board of directors of the Perinatal Association of Michigan.

Elbert S. Parmenter, MD
Dixon, Ill.

The past president of the Alpena County Medical Society, Elbert Smith Parmenter, MD, died Oct. 5 at the age of 71. Doctor Parmenter was a graduate of Rush Medical College and had been affiliated with Alpena General and Rogers City hospitals. He specialized in physical and administrative medicine and was a member of the American College of Physicians.

Homer A. Ramsdell, MD
Manistee

Long-time Manistee physician Homer A. Ramsdell, MD, died Oct. 7 at the age of 86. He was a graduate of the University of Michigan Medical School and served as company physician with the Wolverine Copper Mining Company near Calumet before establishing a Manistee practice in 1913. He was past president of the Manistee County Medical Society.

Gerald H. Rigterink, MD
Kalamazoo

Past president of the Kalamazoo Academy of Medicine, Gerald Harris Rigterink, MD, died Oct. 31 at the age of 72. He was a graduate of Wayne State University School of Medicine and was affiliated with Bronson Methodist and Borgess hospitals in Kalamazoo. He was a member of the American Academy of Family Physicians.

Eugene J. Steinberger, MD
Detroit

Detroit family physician since 1924, Eugene J. Steinberger, MD, died Oct. 26 at the age of 84. Doctor Steinberger was a member of the Ethics Committee of Wayne County Medical Society, past president of the West Side Medical Society. He was former chief of staff of Delray Hospital and on the staffs of Oakwood, Sinai and Southeast General hospitals. He was a graduate of the University of Budapest medical school.

Medico - Legal

"*Locality Rule Applied To General Practitioner*"
Michigan Court of Appeals, Feb. 24, 1975
from *The Citation,* Vol. 31, No. 10

"*Reverse Conviction of Physician for Violating Narcotics Act*"
Michigan Supreme Court, April 29, 1975
from *The Citation,* Vol. 31, No. 11

"*No liability for transfusion under Michigan blood bank act*" Michigan Court of Appeals, Sept. 25, 1974
from *The Citation,* Vol. 30, No. 11

"*State mental health department immune from wrongful death suit*" Michigan Court of Appeals, April 29, 1974
from *The Citation,* Vol. 30, No. 11

CO) PHYSICIANS
OF PHILADELPHIA

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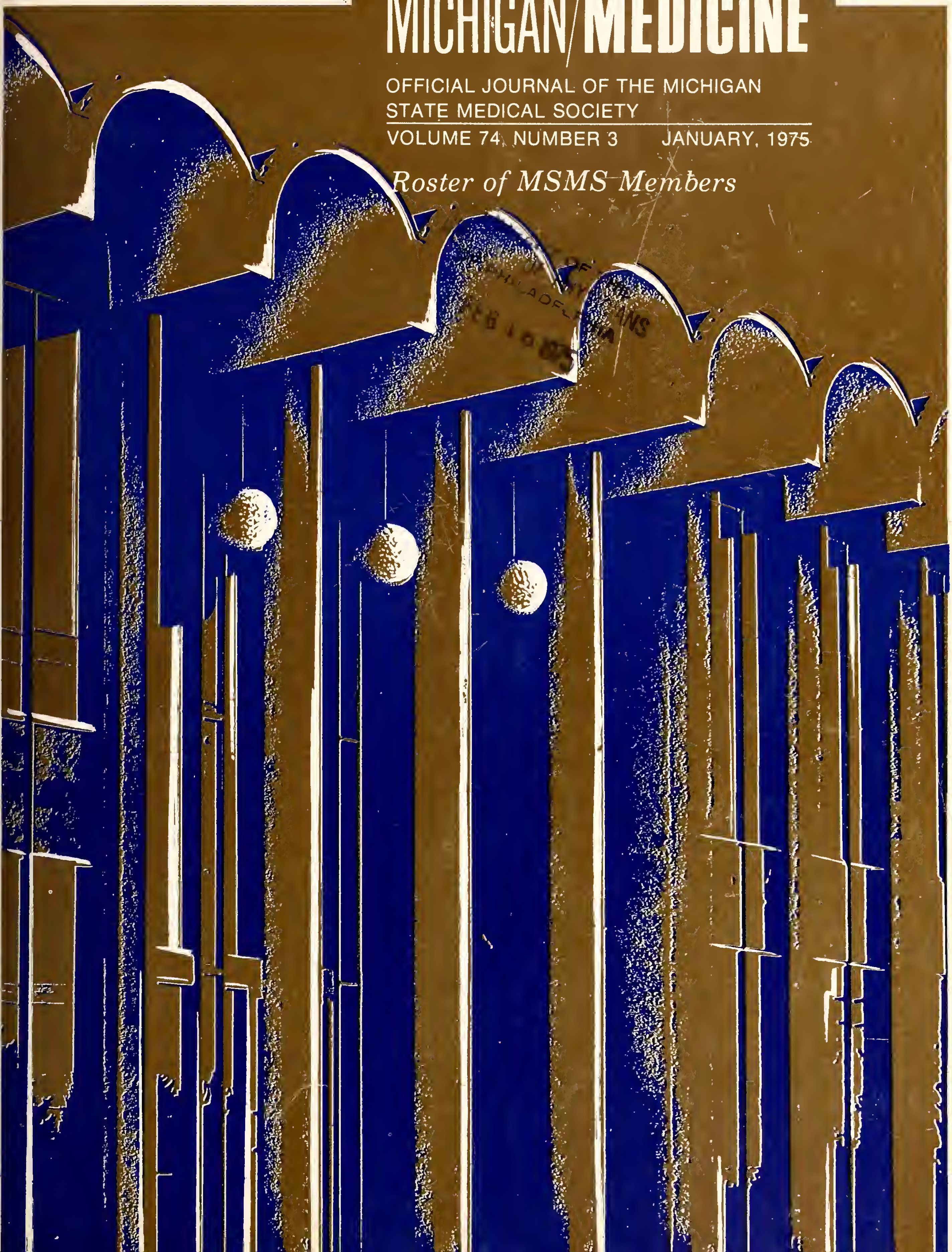
MDS

MICHIGAN/MEDICINE

OFFICIAL JOURNAL OF THE MICHIGAN
STATE MEDICAL SOCIETY
VOLUME 74, NUMBER 3 JANUARY, 1975

Roster of MSMS Members



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John W. Moses, MD, Scientific Editor, *Michigan Medicine*

Michigan State Medical Society Directory

This directory contains an alphabetical listing of each member with his county society code number. The list below shows the code number for each county. The listing also indicates the special membership categories: "L" for Life Member; "M" for Military Members; "N" for Non-Resident Members; "R" for Retired Members; "A" for Associate Members; "O" for Osteopathic; "H" for Honorary; "E" for Active Dues Exempt; "F" for Financial Hardship. All others are Active Members. The directory lists those members as of Nov. 27, 1974.

EXAMPLE:

John J. Smith, M.D.	102	(Kalamazoo County)
333 Cedar Street	R	(Retired Member)
Kalamazoo, Michigan	49007	(Zip Code)

Alcona County (Alpena-Alcona-Presque Isle)	014
Alger County (Marquette-Alger)	134
Allegan County	010
Alpena County (Alpena-Alcona-Presque Isle)	014
Antrim County (Northern Michigan)	170
Arenac County (Bay-Arenac-Iosco)	022
Baraga County (Houghton-Baraga-Keweenaw)	082
Barry County	018
Bay County (Bay-Arenac-Iosco)	022
Benzie County (Grand Traverse-Leelanau-Benzie)	070
Berrien County	026
Branch County	030
Calhoun County	034
Cass County	038
Charlevoix County (Northern Michigan)	170
Cheboygan County (Northern Michigan)	170
Chippewa County (Chippewa-Mackinac)	042
Clare County (Isabella-Clare)	096
Clinton County	046
Crawford County (North Central Counties)	150
Delta County (Delta-Schoolcraft)	050
Dickinson County (Dickinson-Iron)	054
Eaton County	058
Emmet County (Northern Michigan)	170
Genesee County	062
Gladwin County (North Central Counties)	150
Gogebic County	066
Grand Traverse County (Grand Traverse-Leelanau-Benzie)	070
Gratiot County	074
Hillsdale County	078
Houghton County (Houghton-Baraga-Keweenaw)	082
Huron County	086
Ingham County	090
Ionia County (Ionia-Montcalm)	094
Iosco County (Bay-Arenac-Iosco)	022
Iron County (Dickinson-Iron)	054
Isabella County (Isabella-Clare)	096
Jackson County	098
Kalamazoo County	102
Kalkaska County (North Central Counties)	150
Kent County	106
Keweenaw County (Houghton-Baraga-Keweenaw)	082
Lake County (Mecosta-Osceola-Lake)	142
Lapeer County	110
Leelanau County (Grand Traverse-Leelanau-Benzie)	070
Lenawee County	114
Livingston County	118
Luce County	122
Mackinac County (Chippewa-Mackinac)	042
Macomb County	126
Manistee County	130
Marquette County (Marquette-Alger)	134
Mason County	138
Mecosta County (Mecosta-Osceola-Lake)	142
Menominee County	146
Midland County	154
Missaukee County (Wexford-Missaukee)	226
Monroe County	158
Montcalm County (Ionia-Montcalm)	094
Montmorency County (North Central Counties)	150
Muskegon County	162
Newaygo County	166
North Central (Crawford, Gladwin, Kalkaska, Montmorency, Ogemaw, Oscoda, Otsego, Roscommon)	150
Oakland County	174
Oceana County	178
Ogemaw County (North Central Counties)	150
Ontonagon County	182
Osceola County (Mecosta-Osceola-Lake)	142
Oscoda County (North Central Counties)	150
Otsego County (North Central Counties)	150
Ottawa County	186
Presque Isle County (Alpena-Alcona-Presque Isle)	014
Roscommon County (North Central Counties)	150
Saginaw County	190
St. Clair County	194
St. Joseph County	198
Sanilac County	202
Schoolcraft County (Delta-Schoolcraft)	050
Shiawassee County	206
Tuscola County	210
Van Buren County	214
Washtenaw County	218
Wayne County	222
Wexford County (Wexford-Missaukee)	226

MICHIGAN MEDICINE is the official organ of the Michigan State Medical Society, published under the direction of the Publication Committee. Published three times a month, except four times in January, 37 issues, by the Michigan State Medical Society as its official journal. Second class postage paid at East Lansing, Mich. and at additional mailing offices. Yearly subscription rate, $11.00, single copies, $1.50, Directory, $5.00. Additional postage: Canada, $1 per year; Pan-American Union, $2.50 per year, Foreign, $2.50 per year. Printed in USA. All communications relative to manuscripts, advertising news, exchanges, etc., should be addressed to Judith Marr, Michigan State Medical Society, 120 West Saginaw Street, East Lansing, Michigan 48823. Phone Area Code 517, 337-1351. © 1975 Michigan State Medical Society.

Guide to Help Locate Cities within the Counties

This guide matches up the counties for Michigan communities containing doctors.

Ada (Kent)
Addison (Lenawee)
Adrian (Lenawee)
Albion (Calhoun)
Algonac (St. Clair)
Allegan (Allegan)
Allendale (Ottawa)
Allen Park (Wayne)
Alma (Gratiot)
Almont (Lapeer)
Alpena (Alpena)
Ann Arbor (Washtenaw)
Ashley (Gratiot)
August (Kalamazoo)

Bad Axe (Huron)
Baldwin (Lake)
Bangor (Van Buren)
Baraga (Baraga)
Bark River (Delta)
Battle Creek (Calhoun)
Bay City (Bay)
Bay View (Emmet)
Bear Lake (Manistee)
Belding (Ionia)
Bellaire (Antrim)
Belleville (Wayne)
Benton Harbor (Berrien)
Berkley (Oakland)
Berrien Center (Berrien)
Berrien Springs (Berrien)
Bessemer (Gogebic)
Beulah (Benzie)
Big Rapids (Mecosta)
Birch Run (Saginaw)
Birmingham (Oakland)
Blanchard (Isabella)
Blissfield (Lenawee)
Bloomfield Hills (Oakland)
Bloomingdale (Van Buren)
Boyne City (Charlevoix)
Branch (Mason)
Breckenridge (Gratiot)
Bridgeport (Saginaw)
Bridgman (Berrien)
Brighton (Livingston)
Bronson (Branch)
Brooklyn (Jackson)
Brown City (Sanilac)
Buchanan (Berrien)
Byron Center (Kent)

Cadillac (Wexford)
Caledonia (Kent)
Calumet (Houghton)
Camden (Hillsdale)
Capac (St. Clair)
Carleton (Monroe)
Caro (Tuscola)
Caseville (Huron)
Cass City (Tuscola)
Cassopolis (Cass)
Cedar Springs (Kent)
Center Line (Macomb)
Centreville (St. Joseph)
Champion (Marquette)
Charlevoix (Charlevoix)
Charlotte (Eaton)
Chassell (Houghton)
Cheboygan (Cheboygan)
Chelsea (Washtenaw)
Chesaning (Saginaw)
Clare (Clare)
Clarkston (Oakland)
Clawson (Oakland)
Clinton (Lenawee)
Clio (Genesee)
Coldwater (Branch)
Coleman (Midland)
Coloma (Berrien)
Colon (St. Joseph)
Columbiaville (Lapeer)
Concord (Jackson)
Constantine (St. Joseph)
Coopersville (Ottawa)
Corunna (Shiawassee)
Croswell (Sanilac)
Crystal Falls (Iron)
Custer (Mason)

Daggett (Menominee)
Davison (Genesee)
Dearborn (Wayne)
Dearborn Heights (Wayne)
Decatur (Van Buren)
Deckerville (Sanilac)
Deerfield (Lenawee)
Delton (Barry)
Detroit (Wayne)
Dewitt (Clinton)
Dexter (Washtenaw)
Douglas (Allegan)
Dowagiac (Cass)
Drayton Plains (Oakland)
Drummond Island (Chippewa)
Dundee (Monroe)
Durand (Shiawassee)

Eagle Harbor (Keweenaw)
East Detroit (Macomb)
East Jordan (Charlevoix)
East Lansing (Ingham)
East Tawas (Iosco)
Eaton Rapids (Eaton)
Ecorse (Wayne)
Edmore (Montcalm)
Edwardsburg (Cass)
Elk Rapids (Antrim)
Elkton (Huron)
Eloise (Wayne)
Elsie (Clinton)
Engadine (Mackinac)
Escanaba (Delta)
Essexville (Bay)
Evart (Osceola)

Fairgrove (Tuscola)
Farmington (Oakland)
Farwell (Clare)
Fennville (Allegan)
Fenton (Genesee)
Fenwick (Montcalm)
Ferndale (Oakland)
Flat Rock (Wayne)
Flint (Genesee)
Flushing (Genesee)
Fowlerville (Livingston)
Frandor (Ingham)
Frankenmuth (Saginaw)
Frankfort (Benzie)
Franklin (Oakland)
Fraser (Macomb)
Freeland (Saginaw)
Fremont (Newaygo)

Galesburg (Kalamazoo)
Garden City (Wayne)
Gaylord (Otsego)
Gladstone (Delta)
Gladwin (Gladwin)
Glen Arbor (Leelanau)
Gobles (Van Buren)
Goodrich (Genesee)
Grand Beach (Berrien)
Grand Blanc (Genesee)
Grand Haven (Ottawa)
Grand Ledge (Eaton)
Grand Marais (Alger)
Grand Rapids (Kent)
Grandville (Kent)
Grant (Newaygo)
Grayling (Crawford)
Greenville (Montcalm)
Grosse Ile (Wayne)
Grosse Pointe (Wayne)
Grosse Pointe Farms (Wayne)
Grosse Pointe Shores (Wayne)
Grosse Pointe Woods (Wayne)
Gwinn (Marquette)

Hamburg (Livingston)
Hamilton (Allegan)
Hamtramck (Wayne)
Hancock (Houghton)
Hanover (Jackson)
Harbert (Berrien)
Harbor Beach (Huron)
Harbor Springs (Emmet)
Harper Woods (Wayne)
Harrison (Clare)
Harrisville (Alcona)
Harsens Island (St. Clair)
Hart (Oceana)
Hartford (Van Buren)
Haslett (Ingham)
Hastings (Barry)
Hazel Park (Oakland)
Hemlock (Saginaw)
Hessel (Mackinac)
Hickory Corners (Barry)
Highland (Oakland)
Highland Park (Wayne)
Hillsdale (Hillsdale)
Holland (Ottawa)
Holly (Oakland)
Holt (Ingham)
Homer (Calhoun)
Horton (Jackson)
Houghton (Houghton)
Howell (Livingston)
Hudson (Lenawee)
Hudsonville (Ottawa)
Huntington Woods (Oakland)

Imlay City (Lapeer)
Indian River (Cheboygan)
Inkster (Wayne)
Ionia (Ionia)
Iron Mountain (Dickinson)
Iron River (Iron)
Ironwood (Gogebic)
Ishpeming (Marquette)
Ithaca (Gratiot)

Jackson (Jackson)
Jamestown (Ottawa)
Jonesville (Hillsdale)

Kalamazoo (Kalamazoo)
Kalkaska (Kalkaska)
Keego Harbor (Oakland)
Kent City (Kent)
Kinde (Huron)
Kingsford (Dickinson)

Lake City (Missaukee)
Lakeland (Livingston)
Lake Odessa (Ionia)
Lake Orion (Oakland)
Lakeview (Montcalm)
Lambertville (Monroe)
L'Anse (Baraga)
Lansing (Ingham)
Lapeer (Lapeer)
La Salle (Monroe)
Lathrup Village (Oakland)
Laurium (Houghton)
Lawrence (Van Buren)
Lawton (Van Buren)
Leonidas (St. Joseph)
Leslie (Ingham)
Lincoln Park (Wayne)
Linden (Genesee)
Litchfield (Hillsdale)
Livonia (Wayne)
Lowell (Kent)
Ludington (Mason)
Luther (Lake)
Luzerne (Oscoda)

Mackinaw Island (Mackinac)
Madison Heights (Oakland)
Manchester (Washtenaw)
Manistee (Manistee)
Manistique (Schoolcraft)
Manitou Beach (Lenawee)
Marcellus (Cass)
Marine City (St. Clair)
Marion (Osceola)
Marlette (Sanilac)
Marquette (Marquette)
Marshall (Calhoun)
Martin (Allegan)
Marysville (St. Clair)
Mason (Ingham)
Mecosta (Mecosta)
Melvindale (Wayne)
Memphis (St. Clair)
Menominee (Menominee)
Merrill (Saginaw)
Metamora (Lapeer)
Michigan Center (Jackson)
Middleville (Barry)
Midland (Midland)
Milan (Washtenaw)
Milford (Oakland)
Millington (Tuscola)
Mio (Oscoda)
Monroe (Monroe)
Montague (Muskegon)
Montrose (Genesee)
Morenci (Lenawee)
Mount Clemens (Macomb)
Mount Morris (Genesee)
Mount Pleasant (Isabella)
Muir (Ionia)
Mullet Lake (Cheboygan)
Munising (Alger)
Muskegon (Muskegon)
Muskegon Heights (Muskegon)

Nashville (Barry)
Negaunee (Marquette)
Newaygo (Newaygo)
Newberry (Luce)
New Baltimore (Macomb)
New Buffalo (Berrien)
New Era (Oceana)
New Port (Monroe)
Niles (Berrien)
North Branch (Lapeer)
North Muskegon (Muskegon)
Northport (Leelanau)
Northville (Wayne)
Norway (Dickinson)
Novi (Oakland)

Oak Park (Oakland)
Okemos (Ingham)
Olivet (Eaton)
Onaway (Presque Isle)
Onsted (Lenawee)
Ontonagon (Ontonagon)
Orchard Lake (Oakland)
Oscoda (Iosco)
Ossineke (Alpena)
Otisville (Genesee)
Otsego (Allegan)
Ovid (Clinton)
Owosso (Shiawassee)
Oxford (Oakland)

Parchment (Kalamazoo)
Parma (Jackson)
Paw Paw (Van Buren)
Pentwater (Oceana)
Petoskey (Emmet)
Pigeon (Huron)
Pinckney (Livingston)
Pinconning (Bay)
Plainwell (Allegan)
Pleasant Lake (Jackson)
Pleasant Ridge (Oakland)
Plymouth (Wayne)
Pontiac (Oakland)
Portage (Kalamazoo)
Port Huron (St. Clair)
Portland (Ionia)
Potterville (Eaton)
Prudenville (Roscommon)
Pullman (Allegan)

Quincy (Branch)

Reading (Hillsdale)
Reed City (Osceola)
Reese (Tuscola)
Remus (Mecosta)
Richland (Kalamazoo)
Richmond (Macomb)
River Rouge (Wayne)
Riverview (Wayne)
Rives Junction (Jackson)
Rochester (Oakland)
Rockford (Kent)
Rockwood (Wayne)
Rogers City (Presque Isle)
Romeo (Macomb)
Romulus (Wayne)
Roscommon (Roscommon)
Rosebush (Isabella)
Roseville (Macomb)
Royal Oak (Oakland)

Saginaw (Saginaw)
Sagola (Dickinson)
Saline (Washtenaw)
Sandusky (Sanilac)
Sanford (Midland)
Saranac (Ionia)
Saugatuck (Allegan)
Sault Sainte Marie (Chippewa)
Sawyer (Berrien)
Schoolcraft (Kalamazoo)
Scottville (Mason)
Sebewaing (Huron)
Selfridge AFB (Macomb)
Shelby (Oceana)
Shelbyville (Allegan)
Sidney (Montcalm)
Southfield (Oakland)
Southgate (Wayne)
South Haven (Van Buren)
South Lyon (Oakland)
Sparta (Kent)
Spring Lake (Ottawa)
Stambaugh (Iron)
Standish (Arenac)
Stanton (Montcalm)
St. Charles (Saginaw)
St. Clair (St. Clair)
St. Clair Shores (Macomb)
Stephenson (Menominee)
Sterling Heights (Macomb)
St. Ignace (Mackinac)
St. James (Charlevoix)
St. Johns (Clinton)
St. Joseph (Berrien)
St. Louis (Gratiot)
Stockbridge (Ingham)
Sturgis (St. Joseph)
Sunfield (Eaton)
Suttons Bay (Leelanau)
Swartz Creek (Genesee)

Tawas City (Iosco)
Taylor (Wayne)
Tecumseh (Lenawee)
Temperance (Monroe)
Three Rivers (St. Joseph)
Traverse City (Grand Traverse)
Trenton (Wayne)
Troy (Oakland)
Trufant (Montcalm)

Ubly (Huron)
Union City (Branch)
Union Lake (Oakland)
Utica (Macomb)

Vandalia (Cass)
Vassar (Tuscola)
Vicksburg (Kalamazoo)
Vulcan (Dickinson)

Wakefield (Gogebic)
Walkerville (Oceana)
Walled Lake (Oakland)
Warren (Macomb)
Waterford (Oakland)
Watervliet (Berrien)
Wayland (Allegan)
Wayne (Wayne)
Weidman (Isabella)
Wellston (Manistee)
West Branch (Ogemaw)
Westland (Wayne)
Westphalia (Clinton)
White Cloud (Newaygo)
Whitehall (Muskegon)
White Pigeon (St. Joseph)
White Pine (Ontonagon)
Whitmore Lake (Washtenaw)
Williamston (Ingham)
Wixom (Oakland)
Woodhaven (Wayne)
Wurtsmith AFB (Oscoda)
Wyandotte (Wayne)
Wyoming (Kent)

Yale (St. Clair)
Ypsilanti (Washtenaw)

Zeeland (Ottawa)

ALPHABETICAL LISTING OF MSMS MEMBERS

This directory contains an alphabetical listing of each member with his county society code number on the same line as his name. The list of counties with the code numbers is on page 1.

EXAMPLE:
John J. Smith, M.D. 102 (Kalamazoo County)
333 Cedar Street R (Retired Member)
Kalamazoo, Michigan 49007 (Zip Code)

A

HUGO A AACH MD 102
425 SDRRENTD CT R
PUNTA GDRDA FL 33950

AUSTIN A AAROEMA MO 162
1470 PECK ST
MUSKEGDN MI 49441

AONAN ABBASI MD 174
WM BEAUMDNT HOSPITAL A
RDYAL DAK MI 48072

ALI A ABBASI MD 222
1211 ELMWOOD W
CLAWSON MI 48017

A ABBASSIAN MD 222
30914 FORO RD
GAROEN CITY MI 48135

JAMES A ABBDTT MD 222
VA HDSPITAL
ALLEN PARK MI 48101

R RDDERIC ABBDTT MD 062
G-1071 N BALLENGER
FLINT MI 48504

VERNDN C ABBDTT MO 174
111 ILLINDIS ST L
PONTIAC MI 48053

MARTIN M ABBRECHT MO 174
800 S AOAMS RO
BIRMINGHAM MI 48011

GERALD J ABEN MO 222
15901 W 9 MILE RO
SDUTHFIELD MI 48075

ARSENIU B ABLAO MO 106
1330 8RAOFDRD ST NE
GRANC RAPIDS MI 49503

ELIE D ABDULAFIA MD 222
27501 W 14 MILE RD
BIRMINGHAM MI 48010

A O ABRAHAM MD 114
327 W MAIN ST
HUOSON MI 49247

JDS P ABRAHAM MD 222
2799 W GRANO BLVD
OETRDIT MI 48202

SALIEM M ABRAHAMS MD 222
32900 FIVE MILE RD
LIVDNIA MI 48154

SAMUEL M ABRAMSDN MD 222
15041 E SEVEN MILE RD
OETRDIT MI 48205

ANTHCNY M ABRUZZO MD 110
1568 RULANE OR
LAPEER MI 48446

MICHEL A ABSI MD 126
28043 HDDVER RD
WARREN MI 48093

FUAD ABUABARA MD 222
25447 PLYMDUTH
DETROIT MI 48239

RDMULD T ABUEVA MD 102
1521 GULL RD
KALAMAZDD MI 49001

C N ACHARYA MD 106
4500 CASCADE RD S E
GRANC RAPIDS MI 49506

SABAH ACHO MD 174
21240 VIRGINIA
SDUTHFIELD MI 48075

GERALD L ACKERMAN MD 190
4700 PINE HAVEN DR R
SAGINAW MICH 46603

H R ACKERMAN JR MD 174
909 WDUDWARD AVE #104
PDNTIAC MI 48053

JAMES R ACOCKS MD 134
116 RAYMBAULT DR
MARQUETTE MI 49855

JULIU B ACDSTA MD 222
27634 FIVE MILE RO
LIVONIA MI 48154

RDBIN ADAIR MD 174
6405 TELEGRAPH RD
BIRMINGHAM MI 48010

GERALD D ADAMIAN MD 222
15901 W 9 MILE RD
SDUTHFIELO MI 48075

ALBERT C ADAMS MD 062
5210 LAPEER RD
FLINT MI 48503

BURNELL H ADAMS MD 062
609 S LYNCH ST
FLINT MI 48503

CHARLES ADAMS MO 090
405 W GREENLAWN
LANSING MI 48910

ELLIS W ADAMS MD 098
720 W FRANKLIN
JACKSON MICHIGAN 49201

FREDERICK M ADAMS MD 174
800 S ADAMS
BIRMINGHAM MI 48011

JAMES B ADAMS MD 154
4007 ORCHARD DRIVE
MIDLAND MI 48640

JAMES R ADAMS MO 222
39 SHADY HDLLOW DR A
DEARBORN MI 48124

URIAH M ADAMS MD 038

MARCELLUS MI 49067

VINCENT B ADAMS MD 222
19641 MACK AVE
GROSSE PTE MI 48236

ARTHUR ADAMSKI MD 222
19600 VAN DYKE
DETROIT MI 48234

ADELIO ADAN MD 154
3103 WASHINGTON
MIDLAND MI 48640

EARL R ADDISDN MD 054
412 SUPERIOR AVE
CRYSTAL FALLS MI 49920

SUSAN AOELMAN MD 222
630 MERRICK #601
DETROIT MI 48202

IRWIN P ADELSON MD 222
18115 PARKSIDE
DETROIT MI 48221

SEYMOUR S ADELSDN MD 174
20905 GREENFIELO RD
SDUTHFIELD MI 48075

SIDNEY L ADELSON MD 222
29761 FARMBROOK VILLA
SDUTHFIELD MI 48076

EDWARD ADLER MD 174
WM BEAUMDNT HOSP A
ROYAL DAK MI 48072

SIDNEY ADLER MD 222
3011 W GRAND BLVD L
DETROIT MI 48202

RAM ADVANI MD 106
1840 WEALTHY ST SE
GRAND RAPIDS MI 49506

AFTAB A AFTAB MD 062
10118 CLIO ROAD
CLIO MI 48420

MARTHA A AFTANAS MO 146
ST JOSEPH LLDYD HDSP
MENDMINEE MI 49858

MANUCCHEHR AGAH MD 222
6765 DRCHARO LAKE RD
DRCHARO LAKE MI 48033

VERINDER K AGGARWAL MD 222
3800 WDODWARD AVE #308
OETROIT MI 48201

NILS D AGNEBERG MO 146
531 1ST ST
MENDMINEE MI 49856

GEO F AGNEW MD 222
3011 W GRANO BLVD L
DETROIT MI 48202

ASIRUODIN AHMAD MD 174
5885 M-15
CLARKSTDN MI 48016

BUSHARAT AHMAD MD 134
1414 W FAIR AVE
MARQUETTE MI 49855

ZAHEER G AHMAD MD 222
23700 ORCHARD LK RD N
FARMINGTON MI 48024

J H AHRONHEIM MD 098
569 WILDWOOD AVE
JACKSON MICH 49201

DONALD J AIKEN MD 090
2243 W GRAND RIVER
OKEMOS MI 48864

MANUEL A AIRALA MD 034
1554 E MICHIGAN
ALBION MI 49224

MARTA S AIRALA MO 034
1554 E MICHIGAN
ALBION MI 49224

GEO T AITKEN MD 106
260 JEFFERSDN AVE SE
GRANC RAPIOS MI 49502

JAS J AIUTO MD 222
22811 MACK
ST CLAIR SHDRES MI 48083

EDWARO P AJEMIAN MD 102
208 BRUNSDN MED CTR
KALAMAZDU MICH 49006

ISSA S AJLOUNI MD 222
2075 E 14 MILE RD
BIRMINGHAM MI 48008

RDGER M AJLUNI MD 222
17920 FARM RD
LIVDNIA MI 48152

SYED S AKHTAR MD 190
1726 N MICHIGAN
SAGINAW MI 48602

CECIL N AKROYD MD 222
16551 W WARREN
DETROIT MI 48228

EMIL J ALBAN JR MO 222
7940 ALLEN RD
ALLEN PARK MI 48101

A B ALBARRACIN MD 222
3360 CHARLEVDIX
DETROIT MI 48207

A P ALBARRAN MD 222
WAYNE CD GEN HOSP
ELOISE MICH 48132

G DONALD ALBERS MD 106
203 PARIS AVE SE
GRAND PAPIDS MI 49503

MILLARD J ALBERS MD 190
1227 N MICHIGAN AVE
SAGINAW MICH 48602

ROBERT ALBERS MO 186
601 MICHIGAN
HDLLAND MI 49423

DDNALD G ALBERT MD 174
3535 W 13 MILE RO
ROYAL OAK MI 48072

ALBERT J ALBRECHT MD 222
15901 W NINE MILE RD
SOUTHFIELD MI 48075

ROBT W ALBRECHT MD 174
2111 CASS LAKE RD
KEEGO HARBOR MI 48033

ARNOLD A ALBRIGHT MD 034
543 JOHNS PASS AVE R
MADEIRA BEACH FL 33708

ELSA A ALCANTARA MD 222
9801 CONANT
DETROIT MI 48212

LUCILO C ALCANTARA MD 222
9801 CONANT
DETROIT MI 48212

KENT A ALCORN MD 022
2211 MCKINLEY AVE R
BAY CITY MICH 48706

MARSHALL W ALCORN MD 022
1420 CENTER AVE
BAY CITY MI 48706

ALFRED L ALDRICH MD 074
L
ITHACA MICH 48847

LEONARD C ALDRICH MD 082
301 QUINCY ST
HANCOCK MI 49930

NAPIER S ALDRICH MD 030
135 W CLAY L
COLDWATER MI 49036

CHAS W ALDRIDGE JR MD 106
1425 MICHIGAN ST NE
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MSMS at Work . . . Serving Doctors, Public

Here is a description of the Michigan State Medical Society operations and efforts to serve both the doctors of medicine and the public. The material focuses on current activities to provide leadership in a changing local, state and national setting.

The Michigan State Medical Society serves some 8,300 doctors and the people of Michigan.

The Society conducts programs to advance the professional and economic affairs of its members and to provide specific personal services.

The Council, a 27-member board of directors, conducts the continuing business of MSMS at regular meetings.

The House of Delegates, the governing body, represents the component societies of MSMS and decides policy positions.

Interaction with all phases of the medical profession is maintained through 80 permanent and ad hoc committees. A 10-member judicial commission, elected by MSMS membership, oversees ethical principles within the society.

MSMS programs include post-graduate medical education, legislative relations, socio-economics, etc.

Members receive a monthly journal, *Michigan Medicine,* the bi-monthly *Medigram* newsletter and other pertinent publications.

The MSMS headquarters in East Lansing is a distinctive building designed by noted Michigan architect, Minoru Yamasaki.

The decisions of MSMS — the one organization representing the state's entire medical profession — influence the entire medical and health industry.

MSMS at work . . .
. . . developing policies on medicine and health

The procedure by which every MSMS member can participate in MSMS policy decisions has been refined over 108 years. It works like this:

1. Each MSMS member has a voice in establishing the policies of the State Medical Society, through the democratic process set up by the Society.

2. Each MSMS member elects delegates to the MSMS House of Delegates. Each member may ask his delegates to introduce a resolution before the House.

3. Delegates are elected by the 56 component county medical societies. Specialty sections and Student American Medical Association chapters at the three state medical schools are represented. Deans of the medical schools who are members of MSMS are also seated delegates.

4. Resolutions are submitted in writing to the House. Each is turned over to an appropriate reference committee, which holds open hearings at which any interested MSMS member may testify. Some resolutions are concentrated within the profession, but many concern both doctors and public.

5. After the hearings, the committee recommends approval, disapproval, or develops an amendment to the resolution. The report then goes to the House for action.

6. The members of the House act on the reports of each reference committee. Many points of view are presented. Sometimes a special committee is established to study the matter further and report alternatives to the next session.

7. The MSMS Council, which serves as a board of directors and meets regularly between annual sessions, is responsible for implementation of resolutions. The Council also introduces resolutions through the immediate past president. Such resolutions follow the same procedure as those submitted by individual delegates.

MSMS at work . . . . . . through its headquarters staff

A major management study resulted in the current MSMS staff structure of four departments and several adjunct units. Director Warren F. Tryloff is responsible for the operation of the 26-member staff and headquarters.

The Department of Government Relations is crucial to the interests of the physician. Five staff members maintain a continuous liaison for physicians with state and federal legislators, and many government agencies.

The Department of Communications informs members of Society activities and tells the public the doctors' side of the issue. News releases, a monthly TV show, meetings with various media people are all tools to report and interpret MSMS policy and positions to the public.

The Department of Delivery of Quality Health Care coordinates the House of Delegates sessions. Other major activities deal with peer review systems, health care delivery, health manpower and hospital relations.

The Department of Member Services and Continuing Education oversees the Annual Scientific Meeting, plans the MSMS continuing education programs and various workshops, and assists the many scientific committees.

The business manager is in charge of accounting, maintains membership records and handles business operations.

In May 1974 the House of Delegates increased dues so that four new staff members could be employed, to meet the increasing spectrum of challenges faced by today's physicians.

MSMS at work . . . . . . obtaining economic information for doctors

To provide up-to-date socio-economic data for Michigan physicians, the Bureau of Economic Information was established by the 1970 House of Delegates.

MSMS members receive the results of meaningful studies conducted by the bureau and are also asked to participate in statewide surveys. The most recent survey regarding malpractice drew a 38 percent response.

Staff members are working with county medical societies and the state insurance commissioner on study of the malpractice issue, and speaking to interested medical groups throughout the state.

The Bureau continues to expand its data bank by doing independent research. Resultant data from all MSMS research projects is made available to MSMS members and component medical societies and is used by various MSMS committees in their deliberations.

The Bureau compiles current profiles of the state and national economic picture. It publishes a monthly research bulletin, sent to 600 key Michigan physicians, and to state and national organizations concerned with the field of medicine. Recent demographic material on physicians in Michigan has also been collected to provide an awareness of state needs and strengths.

Seven physicians serve as advisors to the Bureau in order to give the staff members guidance on projects.

MSMS at work . . . . . . studying, influencing medical care legislation

Efforts of the MSMS to protect and improve medical care in Michigan are as old as the Society itself. Starting immediately after the Civil War, members worked for three years to convince the Legislature to establish a State Board of Health.

Today a full-time staff person and committees on state and federal legislation keep informed about legislation which can affect the medical profession.

The MSMS legislative efforts are based on resolutions adopted by the House of Delegates, directions from The Council and committee advice. MSMS provides expert testimony before various legislative committees on many medical issues.

Besides maintaining daily contact with the legislature, the Department of Government Relations provides staff and counsel for three influential programs:

Doctor-Of-The-Week Program utilizes the talents of individual physicians in lobbying efforts. The physician arrives at the MSMS offices for a briefing on pending legislation. He spends the rest of the week at the Capitol. Other states have followed Michigan's lead in this innovation.

Component societies' meetings with legislators "back home" provide continuing contact between legislators and the physicians in their constituencies. Several component societies, with MSMS support and advice, hold regular sessions with legislators in their home districts. MSMS offers guidance and direction to any component society willing to implement such meetings.

MDPAC (Michigan Doctors Political Action Committee) is a voluntary nonprofit group of physicians, spouses and other interested persons. It functions separately from MSMS as an autonomous organization. On a bipartisan basis, it supports political candidates sensitive to the needs of organized medicine. In addition, it keeps doctors informed of medical-political issues and gives them an avenue for concerted action. MDPAC offers political educational materials and other information to members, and studies candidates willing to acquaint themselves with medicine's positions. It is guided by a 30-member board of directors.

MSMS at work . . . . . . with state and federal agencies

More and more, medical and health programs are being affected by government agencies. Through organized medical groups, physicians can present a united front to legislative and governmental questions. MSMS remains alert to these questions. Every Michigan doctor is aided by MSMS efforts to understand and influence government programs, regulations and proposals.

An MSMS staff specialist maintains liaison with state governmental agencies, informing appropriate MSMS committees about proposed and operative administrative regulations affecting government-funded health programs and the medical career field.

Administrative regulations which necessitate MSMS involvement are brought to the Council for action, upon recommendation by the Committee on State Legislation and Regulation and the Committee on Federal Legislation.

Important liaison is maintained with the Department of Public Health, the State Health Planning Advisory Committee, the Department of Mental Health, the Medical Practice Board, the Office of Health and Medical Affairs, and other state agencies, as well as the Department of Health, Education and Welfare.

The MSMS staff provides a volume of constantly changing information about government which affects the practice of medicine and the delivery of health care.

MSMS at work . . . . . . with legal opinions for medicine

MSMS seeks to legally protect and advance the medical profession through a powerful trio: the staff-manned Department of Government Relations, the physician-oriented Committee on State Legislation and Regulations, and a legal counsel.

Together they cover the broad area of evaluating and suggesting state legislation and protecting the professional welfare of physician members.

The legal counsel and the legislative affairs manager work in concert to check through the hundreds of prospective statutes submitted each year to the Michigan legislature. Bills that need the professional expertise of legal counsel are sent to his Detroit office where he may analyze and/or write possible amendments as needed, in cooperation with MSMS staff members.

The counsel receives a large number of queries for legal advice from individual members and component societies and from hospital administrators. After researching previous court decisions, or studying the request, he answers each letter, with a carbon that goes into the file at MSMS. Thus, an extensive law-oriented view of medical problems over the past 20 years has been collected through this MSMS service.

The most prolific inquiry sources are the MSMS Committee on State Legislation and Regulations, and the doctors and hospital administrators in the smaller communities.

Counsel answers inquiries from physician members and societies on every conceivable health topic including emergency room procedures, physician assistant problems, drug clinics, component society bylaws problems and others.

MSMS at work . . .
. . . providing continuing medical education

MSMS offers postgraduate medical education opportunities to members through a series of projects reaching every Michigan doctor.

After a special Task Force's report to the 1972 session, the House of Delegates voted to establish a Commission on Continuing Medical Education. This body will develop a flexible series of standards of continuing education for physicians practicing in Michigan.

The fall Scientific Meeting, held annually for more than a century, features a series of lectures, panels and demonstrations to cover the interests of every medical specialty. The selection of speakers and pertinent topics begins one year before the scheduled dates. Work is coordinated by both physician members and staff personnel through the MSMS Department of Member Services and Continuing Education.

Special conferences, such as those on Maternal and Perinatal Health and the Medical Aspects of Organized Athletics, draw a large number of interested physicians.

MSMS at work . . .
. . . communicating with public and profession

The Department of Communications keeps MSMS members informed of activities within the society. It also seeks to make the public aware of progressive medical thinking.

MSMS members receive the monthly *Michigan Medicine* which carries current news and scientific articles, and commentary by MSMS staff and physicians. *Medigram,* a capsulized news sheet, is also mailed twice each month to members to inform them of late-breaking medical news. Periodically, newspaper clippings about medical news are sent to various Michigan leaders in the health professions.

The department also services the news media. News releases are sent regularly to 50 dailies and 300 weeklies. News writers call frequently to obtain background information and news sources for feature stories. News conferences are sometimes called to give the MSMS viewpoint on current topics.

Recently a series of training meetings for medical assistants, entitled Telephone Techniques was coordinated through the department. These workshops are available upon request of physician or medical assistant groups.

A monthly half-hour show entitled *House Call* debuted in 1974 on WTS, Channel 56 in Detroit. Sponsored by MSMS, it features a telephone-question format directed to three guest physician panelists. Between 35 and 45 questions are answered on each program, which is proving itself a good public relations avenue.

"The Orange Packet" is a monthly mailing to key members of the medical profession. Coordinated through several MSMS departments, the packet affords information about meetings, MSMS departmental activities, and other areas of interest to medicine.

The Department of Communications also fills requests for medical speakers at component and public meetings, cooperates with other MSMS departments in their communications needs, and acts as a clearinghouse for questions that come to the headquarters switchboard.

MSMS at work . . .
. . . helping to place new doctors in Michigan

MSMS continues to cooperate with the Michigan Health Council in its efforts to place physicians in Michigan. In 1974 a record number, 127 doctors, were assisted in finding locations in the state, many in rural communities which badly needed medical physicians. By combining resources, MSMS and MHC improve an already effective recruitment and placement program. The goal is to equalize the distribution of physicians throughout the state so all citizens are provided professional medical care.

MSMS at work . . . . . . cooperating with component societies and specialty groups

MSMS maintains liaison with Michigan's 56 component county societies. Efforts to encourage and strengthen these contacts are continuous:

1) Staff members attend county medical society meetings, upon request, to initiate personal contact with officers and members. They present the latest information about MSMS activities and solicit comments of members.

2) The MSMS councilors invite county officers to annual councilor conferences. Delegates, county officers and executive secretaries are able to gain better understanding of the work of their district councilor and the Council as a body.

3) MSMS sponsors Leadership Conferences for leaders of components and specialty societies and regularly sends important reports, notices and publications for their information and consideration.

4) During the past several years, MSMS has worked closer than ever before with the specialty sections and specialty societies. MSMS was instrumental in the formation of the Council of Medical Specialties which meets regularly at the MSMS headquarters and utilizes MSMS staff specialists for advice and guidance.

The Michigan Psychiatric Society also utilizes the services of headquarters staff and facilities.

MSMS at work . . . . . . with PSRO support center

In July 1974, MSMS received a contract from the Department of Health, Education and Welfare to operate a Professional Standards Review Organization Support Center. The professional staff, which includes a director and a field representative, presents informational programs about PSRO at the request of physician groups, and assists emerging PSRO groups with organizational matters. Staff is available for presentations to county medical societies, hospital medical and administrative staffs, allied health organizations and consumer groups.

The Center is collecting medical audit data for review and dissemination to organized PSROs.

Staff also works directly with physician and medical groups on all phases of PSRO organizational planning, such as bylaws, articles or incorporation, and development of contract proposals.

The telephone number of the PSRO Support Center is (517) 332-0875.

MSMS at work . . . . . . in the AMA

The House of Delegates biannually elects representatives from MSMS membership to the AMA House of Delegates, its policy-making body. MSMS delegates introduce resolutions, present Michigan testimony at reference committees and actively participate in floor debates.

In addition, delegates serve as liaison between AMA and component societies and local membership, appearing as speakers before County Medical Society meetings and occasionally holding hearings in the state on issues of national importance.

Due to the proximity of AMA national headquarters in Chicago, AMA executive staff members frequently participate in MSMS conferences and meetings.

MSMS members are often elected to important policy-developing AMA councils and commissions.

MSMS at work . . . . . . providing increasing member benefits

The varied package of member benefits includes group insurance opportunites, vacation trips and an automobile leasing service.

The group insurance opportunities prove that membership in MSMS provides real dollar savings and vital protection.

Five group insurance plans are available to MSMS members. They include:

1. Professional overhead coverage.
2. Michigan Blue Cross-Blue Shield for hospital and medical-surgical care.
3. A disability-sickness policy.
4. Group life.
5. Accidental death and dismemberment.

More than 50% of MSMS members are enrolled in at least one of the plans, at a group rate which offers considerable savings. The Society mails to each new member a series of descriptive brochures concerning group plans available. Stratton, Cheeseman & Associates, East Lansing, is responsible for premium collection and handling of all claims.

In order to participate, a doctor must be a member of MSMS through his county medical society. Interns and residents enrolled as associate members in MSMS are also eligible for any policy.

MSMS sponsors vacation trips each year, combined with medical seminars, for members and their families to various parts of the world. Lectures, discussions and visits to medical facilities presented by leading experts in various fields provide the opportunity to broaden experience and gain a perspective on medicine as practiced in other cultures.

Another benefit through MSMS is an automobile leasing program. Leasing offers substantial tax advantages along with time saving convenience. Members may choose the automobile they wish to rent from a brochure containing rates and details on optional features from the New Car Leasing Program of McCullagh Leasing, Inc. MSMS members receive the same low rate as large fleet users through this exclusive plan.

MSMS at work . . .
. . . with medical students, SAMA chapters

The Michigan SAMA officers attending the 1970 Annual Session requested that SAMA representatives be given official voting privileges. Frankly stating that many medical students viewed organized medicine with distrust, the spokesman stated: "To our surprise, we found here a vital, responsive, democratic group actively endeavoring to better the practice and availability of medical care in the state."

MSMS believes that students' enthusiasm and fresh viewpoints strengthen the medical profession. Accordingly, the delegates concurred and the three Michigan medical schools seated voting delegates for the first time.

Students also participate on committees of special interest to them, such as drug dependence, rural health, public relations, maternal welfare. SAMA officers periodically report their activities to MSMS and are asked by *Michigan Medicine* to express their views on contemporary medical issues.

For many years, MSMS has given financial grants to the Student American Medical Association chapters in Michigan for programs and conferences. A new MSMS liaison committee of interested doctors and students is set up to hear student concerns and needs.

Working closely with SAMA and the Michigan Hospital Association, MSMS has coordinated a program whereby students serve during the summer in community hospitals. Participants, who have completed their freshman year in medical school, serve under a doctor-preceptor and receive a stipend from the hospital.

Legislative efforts to assist medical schools and students continue, of course, in the MSMS department of legislative affairs.

MSMS at work . . .
. . . for more than a century of service

In 1819, the five Detroit physicians practicing in Detroit organized the "Michigan Medical Society" under Territorial laws. Since there were only five members and seven offices, some held two offices.

This society, dedicated to insuring a "clean, well-educated, honest profession in Michigan," was limited largely to observing state medical laws. It was not until June 5, 1866, that about 100 physicians met in Detroit to hear Morse Stewart, MD, claim that "The profession had failed to promote properly the advancement of medical, individual growth and development . . ." As a result the present MSMS was officially founded.

Many members of the new organization were involved in the push to establish a State Board of Health, which was inaugurated in 1873. During the remainder of the century, members grew in scientific knowledge. Physicians were urged to observe the AMA code of ethics, and articles were published in the *Peninsular Journal.* County societies were formed and in 1902, after 17 years of discussion and debate, the organization approved a House of Delegates pattern.

The next 15 years was a time of active growth. The meetings of 1915 to 1920 sound curiously contemporary: Delegates heard about the increase of syphilis and gonorrhea, the rising printing costs of the *Journal,* and the need to be "alert and watchful" in the face of spreading government programs in health care.

The 1930's, although reflecting the effects of the depression, was a decade of great service to members and the public. On Aug. 20, 1931, with a polio epidemic threatening, the MSMS sent an immediate bulletin to all members describing the tell-tale symptoms. Physicians operated on thousands of people under the Afflicted and Crippled Children's program, and their no-fee policy saved the state of Michigan over 3 million dollars. MSMS began working with state health agencies to reduce infant and maternal mortality rates. A doctor placement service was initiated and the House of Delegates approved the group medical-surgical care plan which became Michigan Blue Shield-Blue Cross.

In the 1940's, of course, the important matters were the war and defense efforts. By 1943-44 more than 2,100 Michigan doctors were in the Armed Forces. However, ideas continued to be implemented by MSMS. In 1944 the Michigan Health Council was incorporated, and the following year the Michigan Foundation for Medical and Health Education was born. The first statewide Rural Health Conference was held, and the first Michigan Cancer Conference.

The 1950's ended with the ground breaking of the new MSMS headquarters on Abbott Road, East Lansing. With the heightened post-war emphasis on communications, MSMS continued to work for the profession through publications, radio and television programs, and motion pictures.

In 1961 the MSMS moved to its new quarters to improve services to members and the public. The Centennial Year of the Society was celebrated in 1965 in Detroit. Activities have been modified so committees of the House of Delegates and the Society now study current medical and social issues and recommend action designed to serve the people of Michigan.

Specific questions about MSMS member benefits or services to the public may be addressed to:
Warren F. Tryloff, Director, Michigan State
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East Lansing, MI 48823

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Addresses for Agencies and Associations in the Medical Field

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American Medical Association (312/751-6000)
Headquarters: 535 N. Dearborn St., Chicago 60610
Washington Office: 1776 K Street, Washington, D. C. 20006

Michigan Association for Regional Medical Programs (Phone: 517/351-0290)
1111 Michigan Ave., East Lansing, MI 48823

Michigan Doctors Political Action Committee
P. O. Box 769, East Lansing, MI 48823

Michigan Foundation for Medical and Health Education (Phone: 517/337-1351)
120 W. Saginaw St., East Lansing, MI 48823

Michigan Health Council (Phone: 517/ED7-1615)
Box 1010, East Lansing, MI 48823

Michigan Hospital Association
(Phone: 517/484-8415)
2213 E. Grand River, Lansing, MI 48913

Michigan Hospital Service (Blue Cross)
(313/225-9652)
600 Lafayette East, Detroit, MI 48226

Michigan Medical Service (Blue Shield)
(313/225-9000)
600 Lafayette East, Detroit, MI 48226

State of Michigan

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Donald C. Smith, MD, Principal Advisor to the Governor
Jay G. Endsley, Acting Director
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Medical Practice Board, 1033 S. Washington, Lansing, MI 48933
Genevieve Dionise, Administrative Assistant
(Phone: 517/373-0680)

Department of Mental Health, Lewis Cass Bldg., Lansing, MI 48913
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Department of Public Health, 3500 N. Logan, Lansing, MI 48906
Maurice S. Reizen, MD, Director
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Department of Social Service, Commerce Center Building, Lansing, MI 48913
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Dean: Robert Coye, MD (Phone: 313/577-1335)

Michigan State University
College of Human Medicine
East Lansing, MI 48824
Dean: Andrew Hunt, MD (Phone: 353-1733)

Who to Call at MSMS Headquarters

The following staff members serve committees and/or are designated as staff specialists in the following fields.

Address all mail to MSMS, Box 950, East Lansing 48823, Phone: 517/337-1351.

Automobile Lease Plan — Richard Campau
Continuing Medical Education (Accreditation)—Helen Schulte
Doctor-of-the-Week Legislative Project—John Richards
Dues Payments—Robert Roney or Peg Berry
Governmental Agencies—Sherry Hall
Health Career Recruitment—Sherry Decker
HMO (Health Maintenance Organization)—Richard Campau
Judicial Commission—Vada Davis
Legislation—Bruce Ambrose
Malpractice—Ambrose, Anthony, Auer, Campau, Scholten
Maternal Health—Helen Schulte
Medigram and *Michigan Medicine*—Judy Marr
Meetings (National, State, Specialty)—Katie Brewbaker
Member Services—Wayne Burmeister
Membership Records—Peg Berry
Michigan Psychiatric Society—Helen Schulte
MSMS Annual Scientific Meeting—Wayne Burmeister
MSMS Group Tours—Helen Schulte
MSMS House of Delegates Meeting—Richard Campau
MSMS Sponsored Insurance Programs—Robert Roney
News Media Relations—Mert Scholten
Physician Assistant—Mert Scholten
Physician Placement—Richard Campau
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Socio-Economic Surveys—John Anthony
Specialty Societies—Katie Brewbaker

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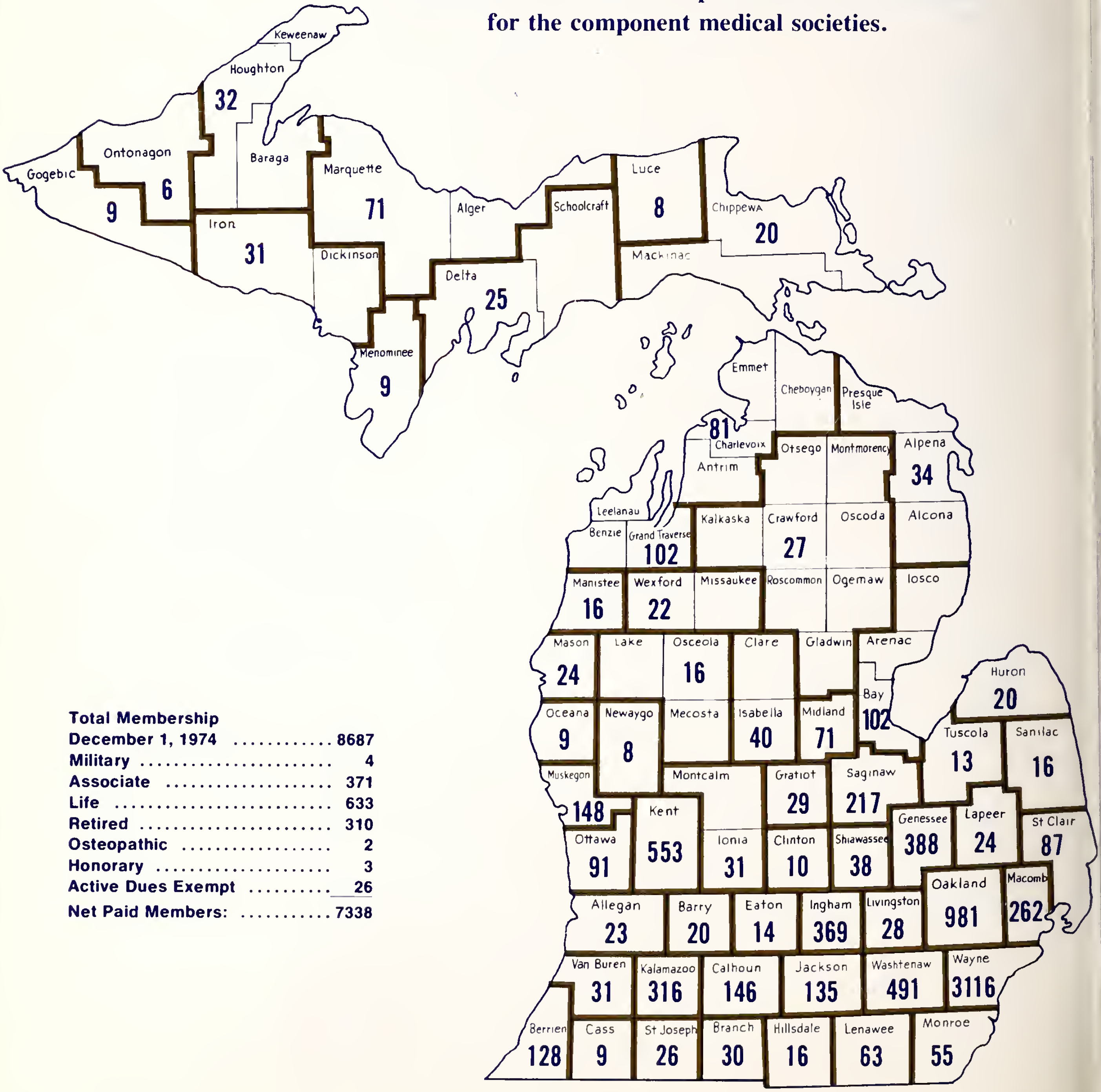
Directory of MSMS Members

The brown lines on the map indicate the boundaries for the component medical societies.


Keweenaw
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Jackson
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Washtenaw
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Wayne
3116
Berrien
128
Cass
9
St Joseph
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Branch
30
Hillsdale
16
Lenawee
63
Monroe
55

Total Membership	
December 1, 1974	8687
Military	4
Associate	371
Life	633
Retired	310
Osteopathic	2
Honorary	3
Active Dues Exempt	26
Net Paid Members:	7338

Disruptive anxiety usually meets its match here.

- Often effective when reassurance and counseling are insufficient.
- Three dosage strengths to meet most therapeutic needs.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions:

ORAL: In the elderly and debilitated and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six.

INJECTABLE: Keep patients under observation, preferably in bed, up to three hours after initial injection; forbid ambulatory patients to operate vehicle following injection; do not administer to patients in shock or comatose states; use reduced dosage (usually 25 to 50 mg) for the elderly or debilitated and for children age twelve or older.

ORAL AND INJECTABLE: Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating compounds such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

LIBRIUM 5 ROCHE
LIBRIUM 25 ROCHE
LIBRIUM 10 ROCHE

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

With the injectable form, isolated instances of hypotension, tachycardia and blurred vision have been reported; also hypotension associated with spinal anesthesia, and pain following I.M. injection.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral: Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

For Parenteral Administration: Should be individualized according to diagnosis and response. While 300 mg may be given during a 6-hour period, do not exceed this dose in any 24-hour period. To control acute conditions rapidly, the usual initial adult dose is 50 to 100 mg I.M. or I.V. Subsequent treatment, if necessary, may be given orally. (See Precautions.)

Supplied:

Oral: Librium® (chlordiazepoxide HCl) *Capsules*—5 mg, 10 mg, 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50, available singly and in trays of 10.

Libritabs® (chlordiazepoxide) *Tablets*—5 mg, 10 mg and 25 mg—bottles of 100 and 500.

Injectable: Librium® (chlordiazepoxide HCl) *Ampuls*—Duplex package consisting of a 5-ml dry-filled ampul containing 100 mg chlordiazepoxide HCl in dry crystalline form, and a 2-ml ampul of Special Intramuscular Diluent (for I.M. administration). Before preparing solution for I.M. or I.V. administration, please consult package insert for instructions on preparation and administration of solutions. Boxes of 10.

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Nutley, New Jersey 07110

Librium®
(chlordiazepoxide HCl)
5 mg, 10 mg, 25 mg capsules

Please see following page.

Disruptive anxiety usually meets its match here.

LIBRIUM
5 ROCHE
LIBRIUM
25 ROCHE
LIBRIUM
10 ROCHE

ROCHE

Librium®
(chlordiazepoxide HCl)
5 mg, 10 mg,
25 mg capsules

Please see preceding page for summary of product information.

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MICHIGAN/MEDICINE

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STATE MEDICAL SOCIETY
VOLUME 74, NUMBER 36 DECEMBER, 1975

Inside:

794 Doctors of the Week Wanted
755-773 Scientific articles on VD in children, a neonatal recovery room, brachial artery occlusion, infectious mononucleosis and breast cancer

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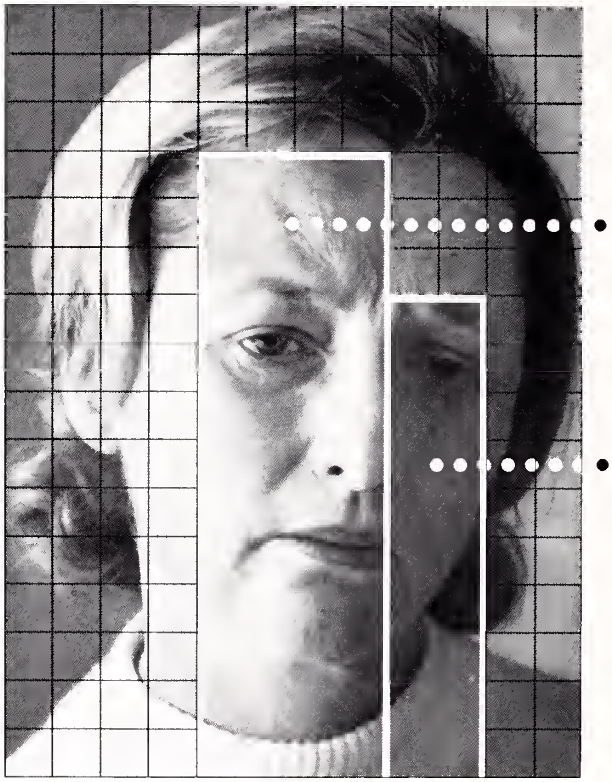
MDS

ARBITRATION AND THE PHYSICIAN

Physicians, lawyers and hospital personnel map plans (below) for educating the parties involved in the new Michigan arbitration system for solving doctor-patient and hospital-patient disputes. The group around the board room table at MSMS headquarters will serve as experts in the new education process. At left facing the camera is Rhoda Powsner, MD, Ann Arbor, MSMS representative on the Arbitration Advisory Committee to the Insurance Commissioner, which is leading the education effort. For the answers to your questions on how the arbitration process involves the physician, see pages 774-775 inside.

Both often



Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful

LIBRIUM®
(chlordiazepoxide HCl)

FOR ALL THE RIGHT REASONS.

- prompt and specific action
- documented benefit-to-risk ratio
- three dosage strengths to meet most therapeutic needs

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.
Contraindications: Patients with known hypersensitivity to the drug.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.
Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.
Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)
Supplied: Librium® (chlordiazepoxide HCl) *Capsules*, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) *Tablets*, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

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LIBRIUM® CIV
chlordiazepoxide HCl/Roche
5 mg, 10 mg, 25 mg capsules

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IN PAINFUL ACUTE CYSTITIS*

*nonobstructed;
due to susceptible
organisms

RELIEVE THE PAIN

WHILE YOU ELIMINATE THE PATHOGENS.

FOR THE PAIN

☐ **Early relief of painful symptoms** such as burning and pain associated with urgency and frequency.

FOR THE PATHOGENS

☐ **Effective control of susceptible pathogens** such as *E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis* and, less frequently, *Proteus vulgaris*.

Appropriate antibacterial therapy: Up to 3 days therapy with Azo Gantrisin 4 to 6 tablets *Stat.*, then 2 tablets *q.i.d.*; then 11 days with Gantrisin (sulfisoxazole) may be considered.

AZO GANTRISIN®

(50 mg phenazopyridine HCl and 0.5 Gm sulfisoxazole)

Before prescribing, please consult complete product information, a summary of which follows.

Indications: In adults, urinary tract infections complicated by pain (primarily cystitis, pyelitis and pyelonephritis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. *Important Note:* Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response. Add aminobenzoic acid to culture media for patients already taking sulfonamides. Increasing frequency of resistant organisms currently is a limitation of the usefulness of antibacterial agents including the sulfonamides. Blood levels should be measured in patients receiving sulfonamides for serious infections, since there may be wide variations with identical doses; 12 to 15 mg/100 ml is considered optimal for serious infections; 20 mg/100 ml should be the maximum total sulfonamide level, as adverse reactions occur more frequently above this level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period. Contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with gastrointestinal disturbances, because of phenazopyridine HCl component.

Warnings: Safe use in pregnancy has not been established. Teratogenicity potential has not been thoroughly investigated. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported; clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts and urinalysis with careful microscopic examination should be performed frequently during sulfonamide therapy.

Precautions: Use with caution in patients with impaired renal or hepatic function, severe allergy, bronchial asthma and in glucose-6-phosphate dehydrogenase-deficient individuals. In the latter, hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme (Stevens-Johnson syndrome), skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis. *C.N.S. reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, polyarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide and thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Usual adult dosage for acute, painful phase of urinary tract infections is 4 to 6 tablets initially, then 2 tablets four times daily for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment of the infection with Gantrisin (sulfisoxazole) may be considered.

Note: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine soon after ingestion.

How Supplied: Tablets, each containing 0.5 Gm sulfisoxazole and 50 mg phenazopyridine HCl —bottles of 100 and 500.

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